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Eatman et al.

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(54) **OVERHEAD DISPLAY HAVING CONCENTRIC INNER AND OUTER DISPLAYS AND ASSOCIATED SYSTEMS AND METHODS**

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CPC ***G07F 17/3211*** (2013.01); ***G07F 17/3276*** (2013.01)

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See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,830,395	A	4/1958	Hutchens	
6,578,301	B1	6/2003	Ericson	
8,894,487	B2	11/2014	Granger et al.	
9,659,434	B2	5/2017	Bainbridge et al.	
2008/0067312	A1*	3/2008	Allen	F16M 13/02 248/317
2013/0116809	A1*	5/2013	Carpenter	G07F 17/323 700/92
2014/0342825	A1*	11/2014	Schrementi	G07F 17/3216 463/31
2017/0345250	A1*	11/2017	Pececnik	G07F 17/3211
2017/0358176	A1	12/2017	Carpenter et al.	
2019/0056762	A1*	2/2019	Azam	G06F 1/182

* cited by examiner

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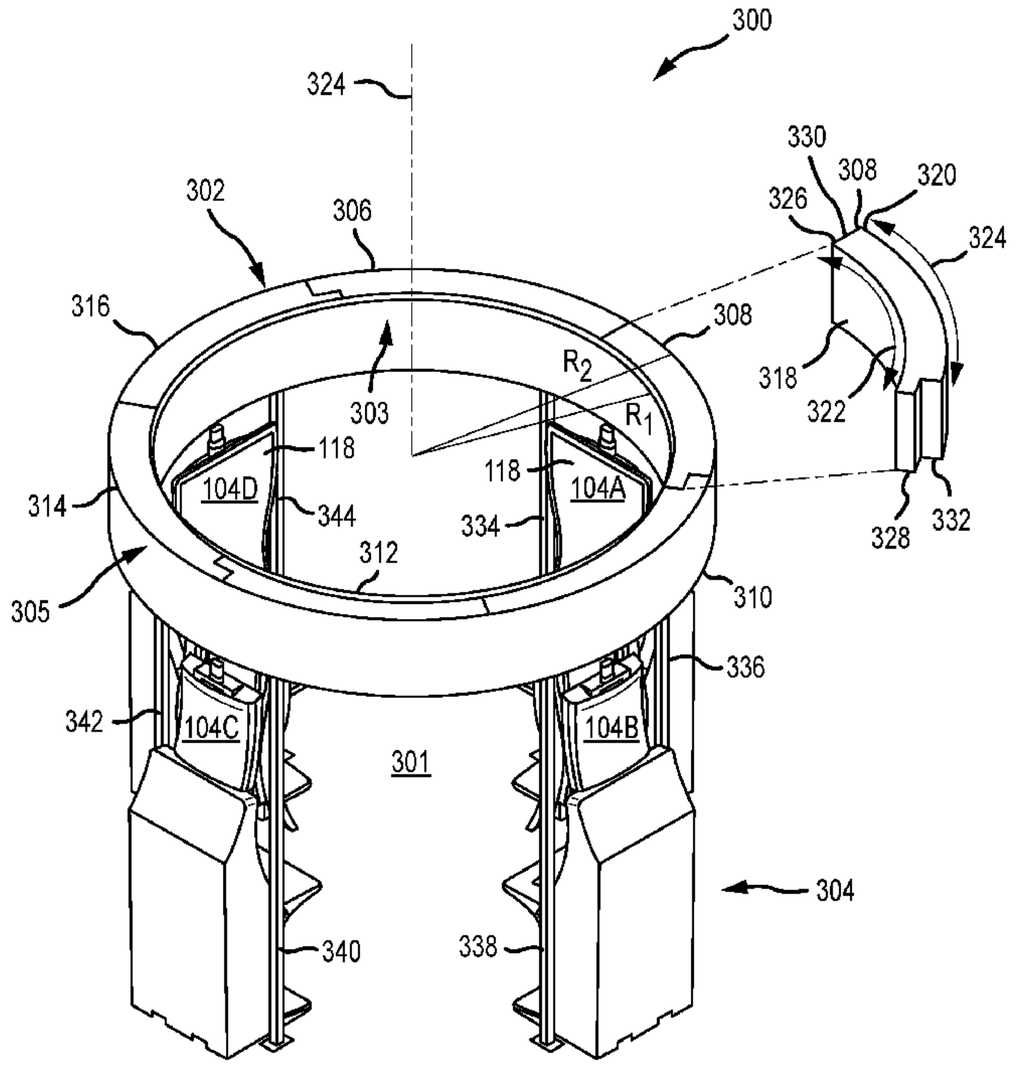
(57) **ABSTRACT**

An overhead display configured to be mounted over one or more electronic gaming machines includes a plurality of display segments, where each display segment of the plurality of display segments is configured to mate with at least one other display segment. Each display segment includes an inner display panel, and an outer display panel, where the outer display panel is spaced apart from and outward of the inner display panel. Each display segment may further mate with one or more other display segments to form the overhead display in a variety of shapes, such as a ring or circular shape, an oval shape, a triangular shape, a rectangular shape, or a square shape.

20 Claims, 12 Drawing Sheets



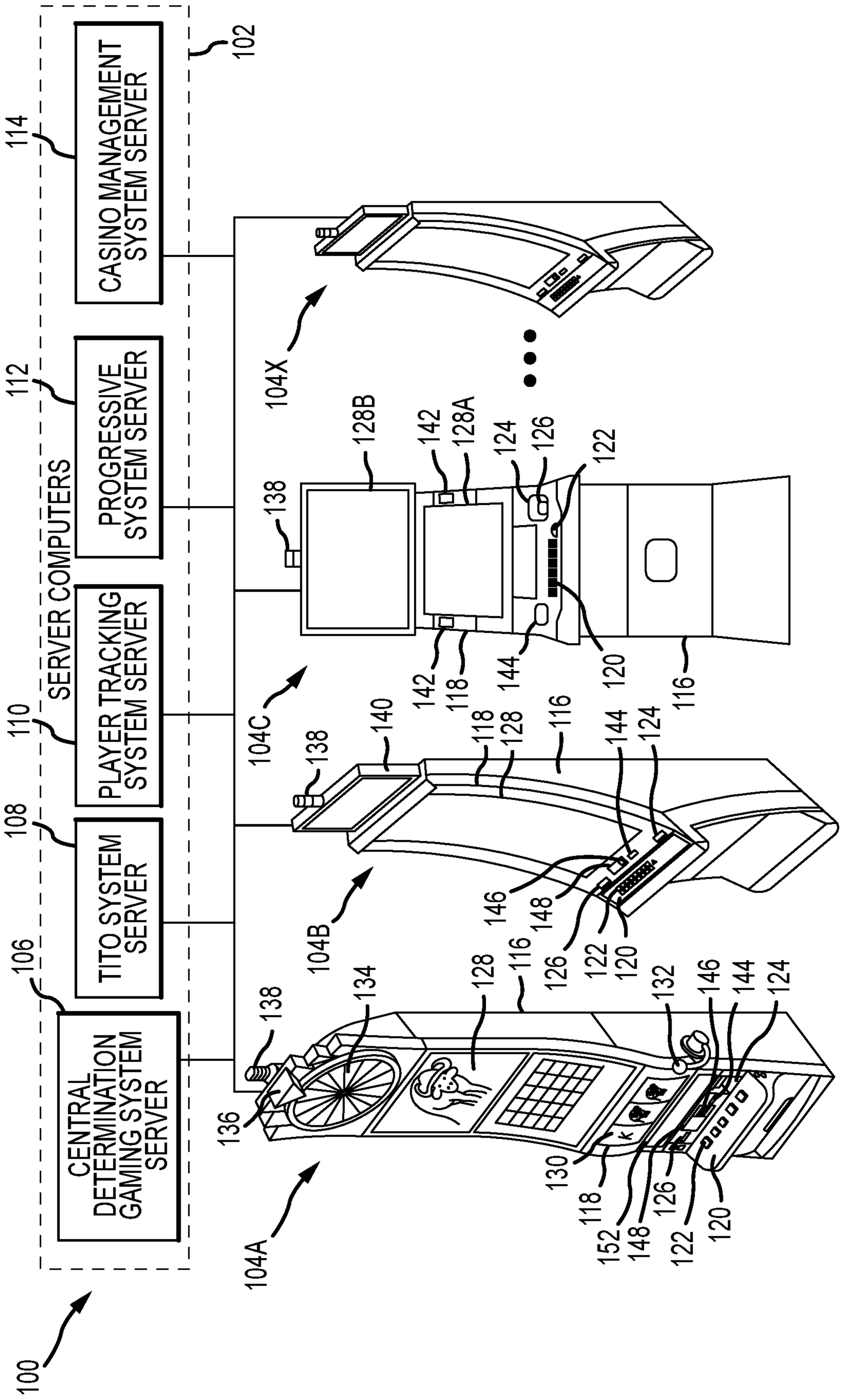

100
102
CASINO MANAGEMENT SYSTEM SERVER
114
SERVER COMPUTERS
PROGRESSIVE SYSTEM SERVER
112
PLAYER TRACKING SYSTEM SERVER
110
TITO SYSTEM SERVER
108
CENTRAL DETERMINATION GAMING SYSTEM SERVER
106
104A
104B
104C
104X
128B
142
128A
124
126
122
138
142
118
144
120
116
140
118
128
116
144
124
146
148
134
128
116
126
122
120
132
146
144
124
136
130
118
152
148
126
122
120

FIG.1

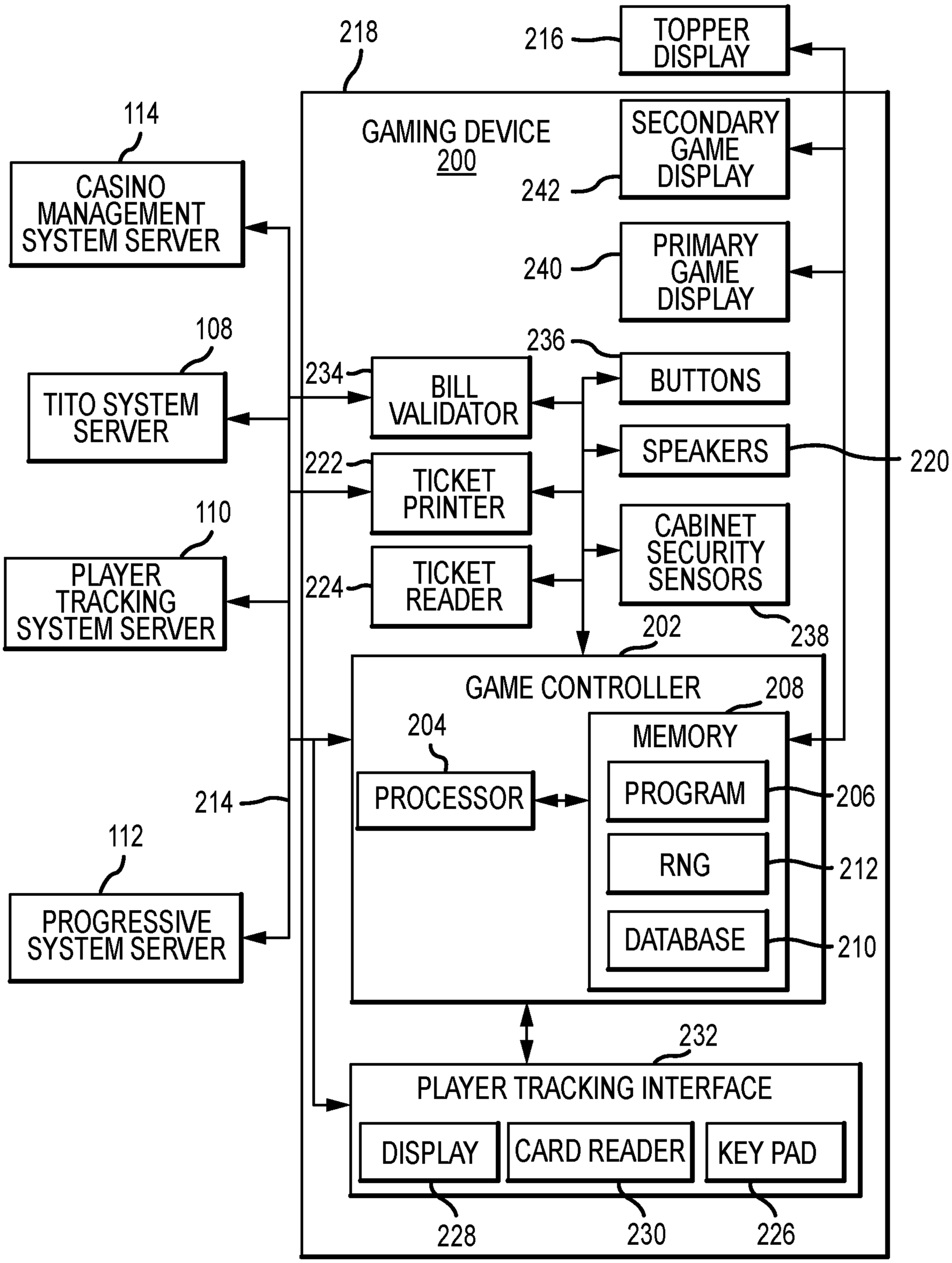

218
216
TOPPER DISPLAY
114
CASINO MANAGEMENT SYSTEM SERVER
GAMING DEVICE
200
SECONDARY GAME DISPLAY
242
PRIMARY GAME DISPLAY
240
108
TITO SYSTEM SERVER
234
BILL VALIDATOR
236
BUTTONS
SPEAKERS
220
222
TICKET PRINTER
110
PLAYER TRACKING SYSTEM SERVER
224
TICKET READER
CABINET SECURITY SENSORS
238
202
GAME CONTROLLER
208
MEMORY
204
PROCESSOR
PROGRAM
206
214
RNG
212
112
PROGRESSIVE SYSTEM SERVER
DATABASE
210
232
PLAYER TRACKING INTERFACE
DISPLAY
CARD READER
KEY PAD
228
230
226

FIG.2

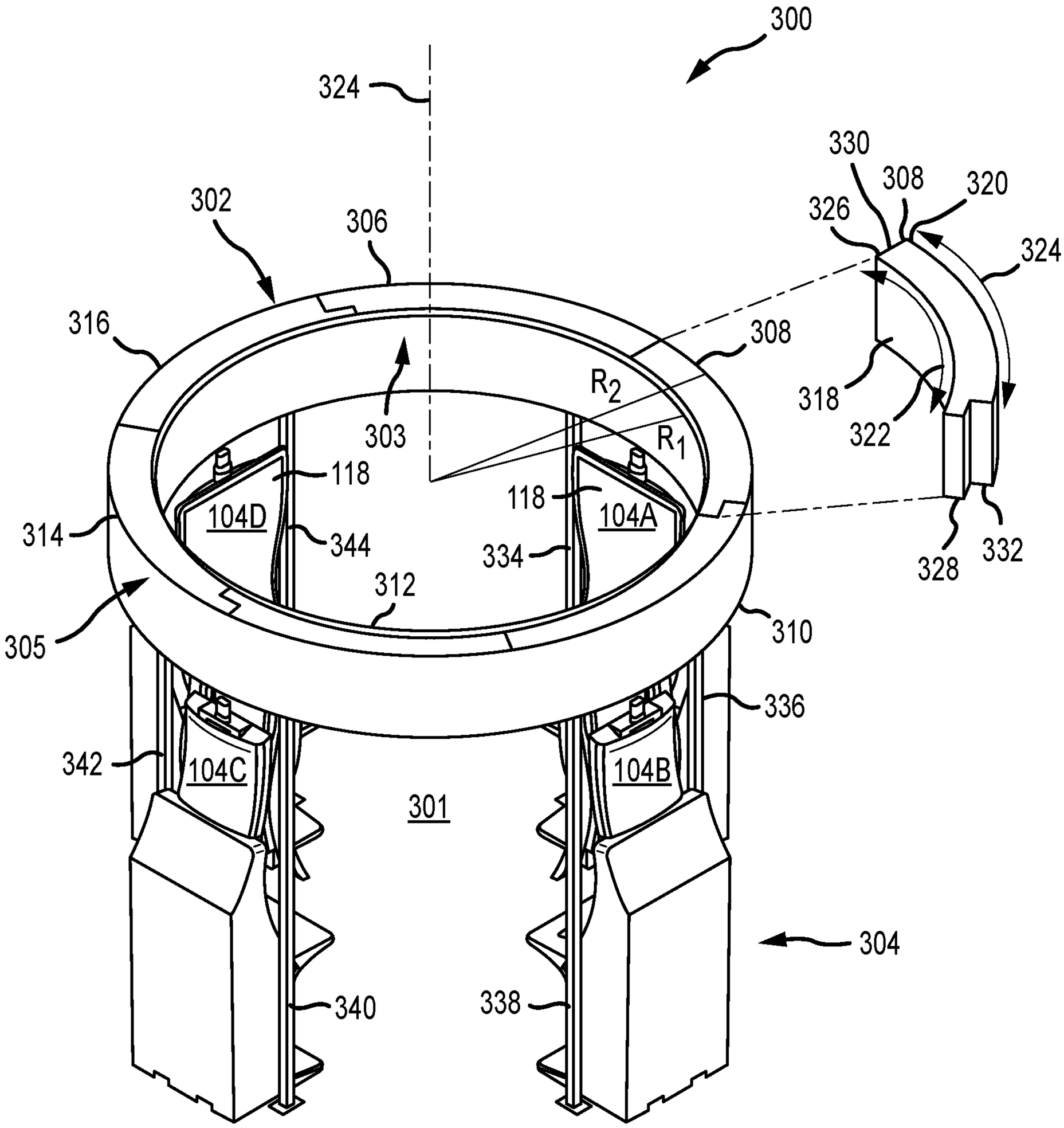

300
324
302
306
316
308
303
R_2
R_1
118
118
104D
104A
314
344
334
312
305
310
336
342
104C
104B
301
304
340
338
330
308
320
326
324
318
322
328
332

FIG.3

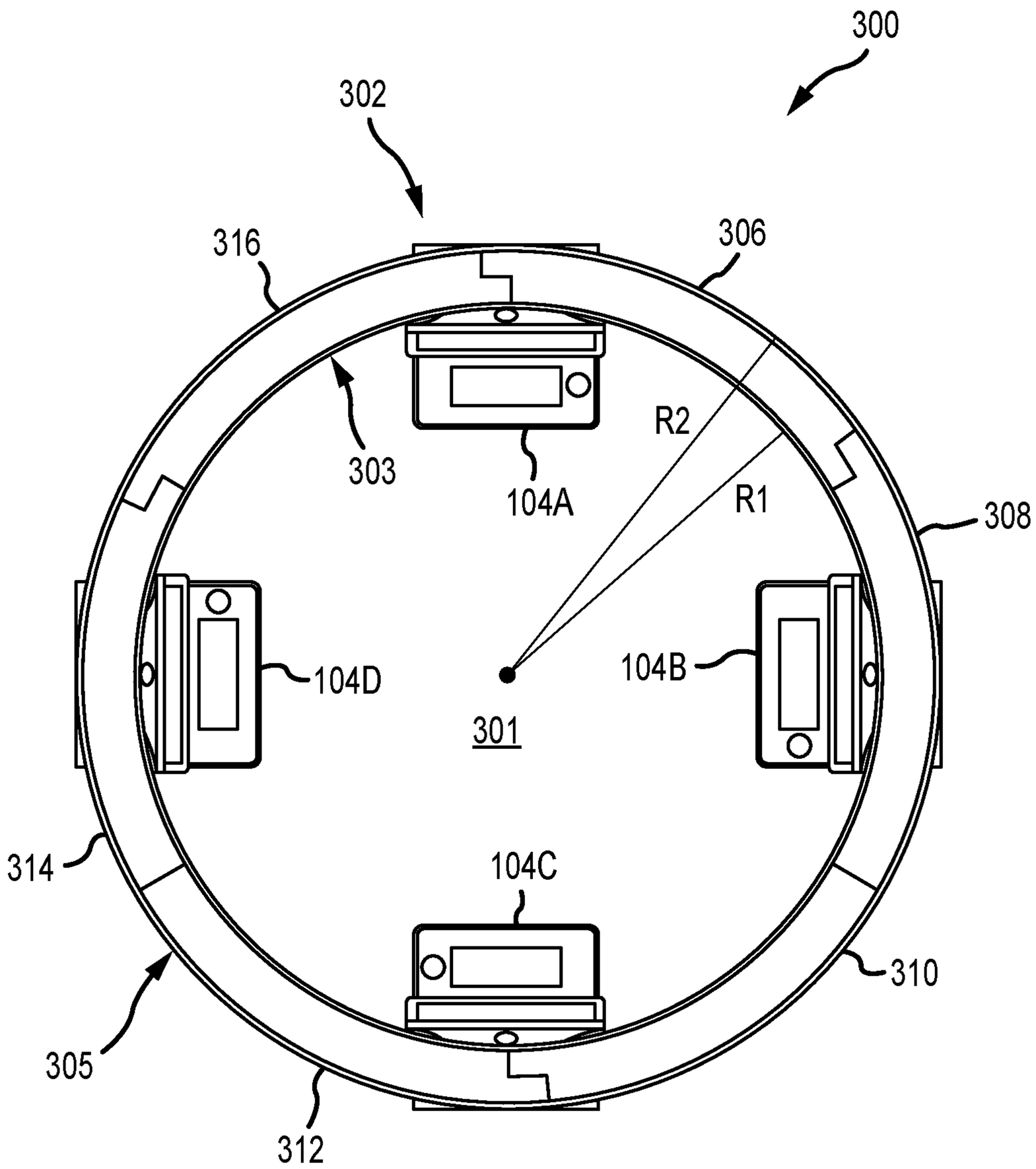

300
302
316
306
303
104A
R2
R1
308
104D
104B
301
314
104C
310
305
312

FIG.4

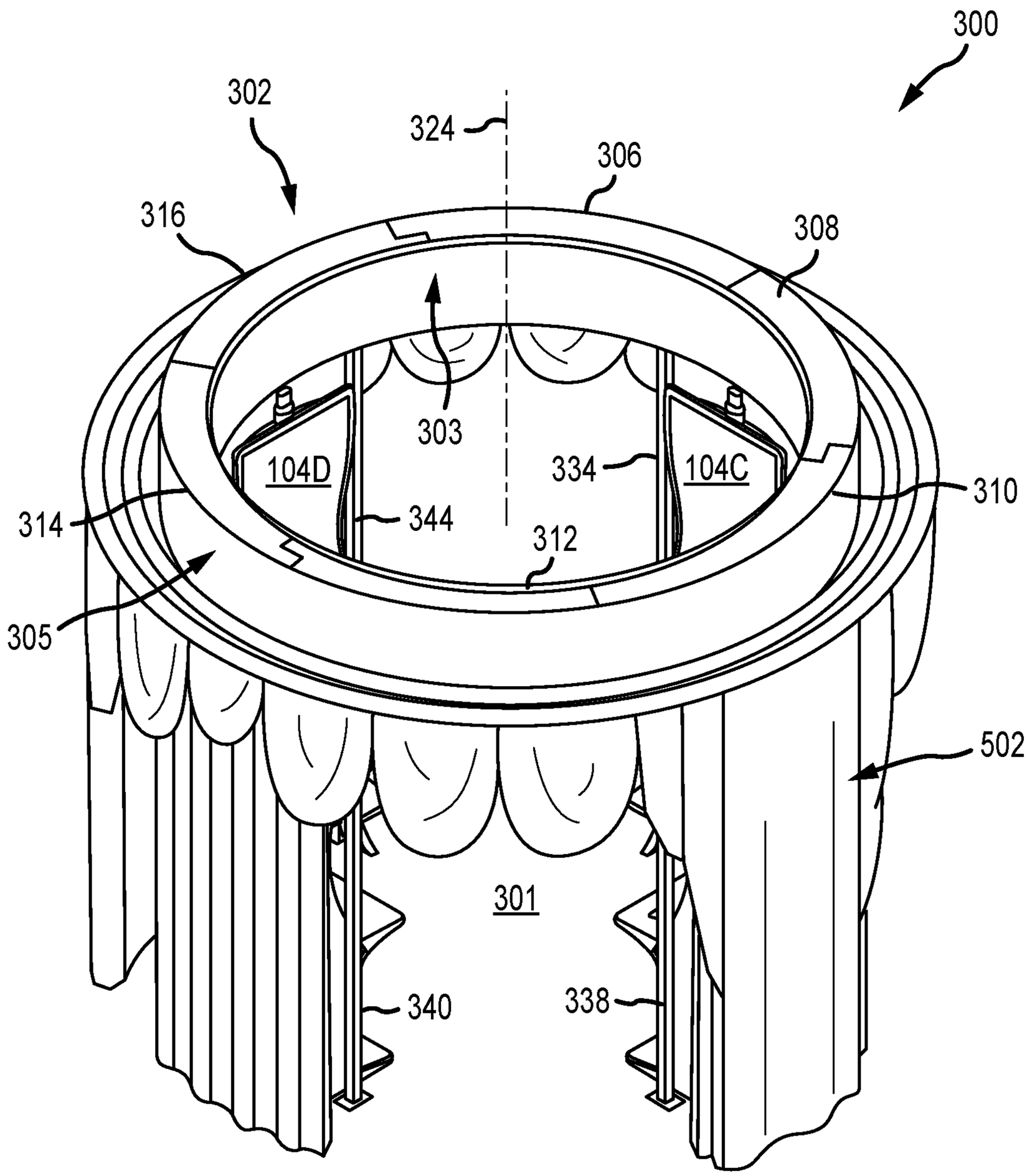

300
302
324
306
316
308
303
104D
334
104C
310
314
344
312
305
502
301
340
338

FIG.5

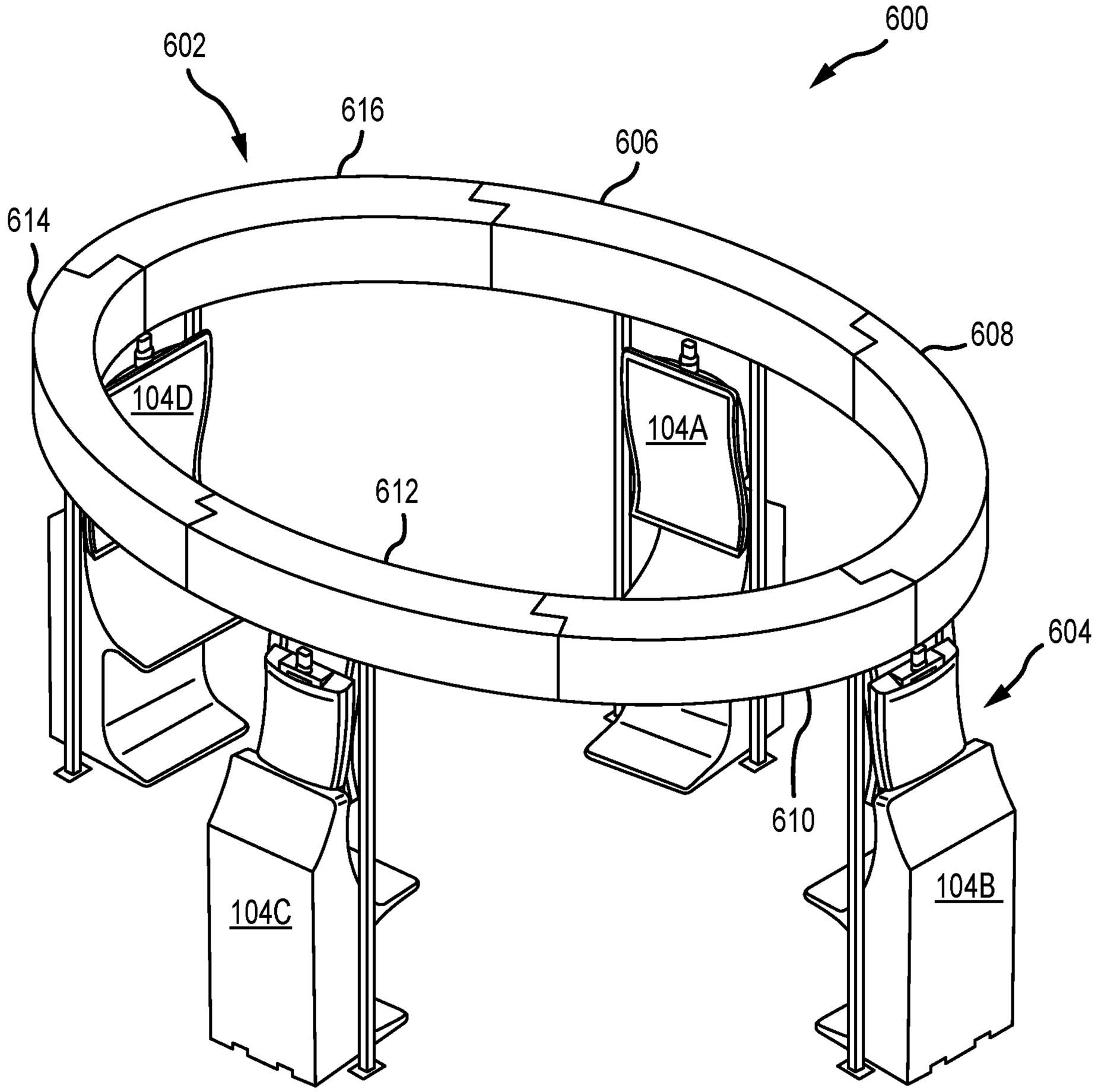


FIG.6

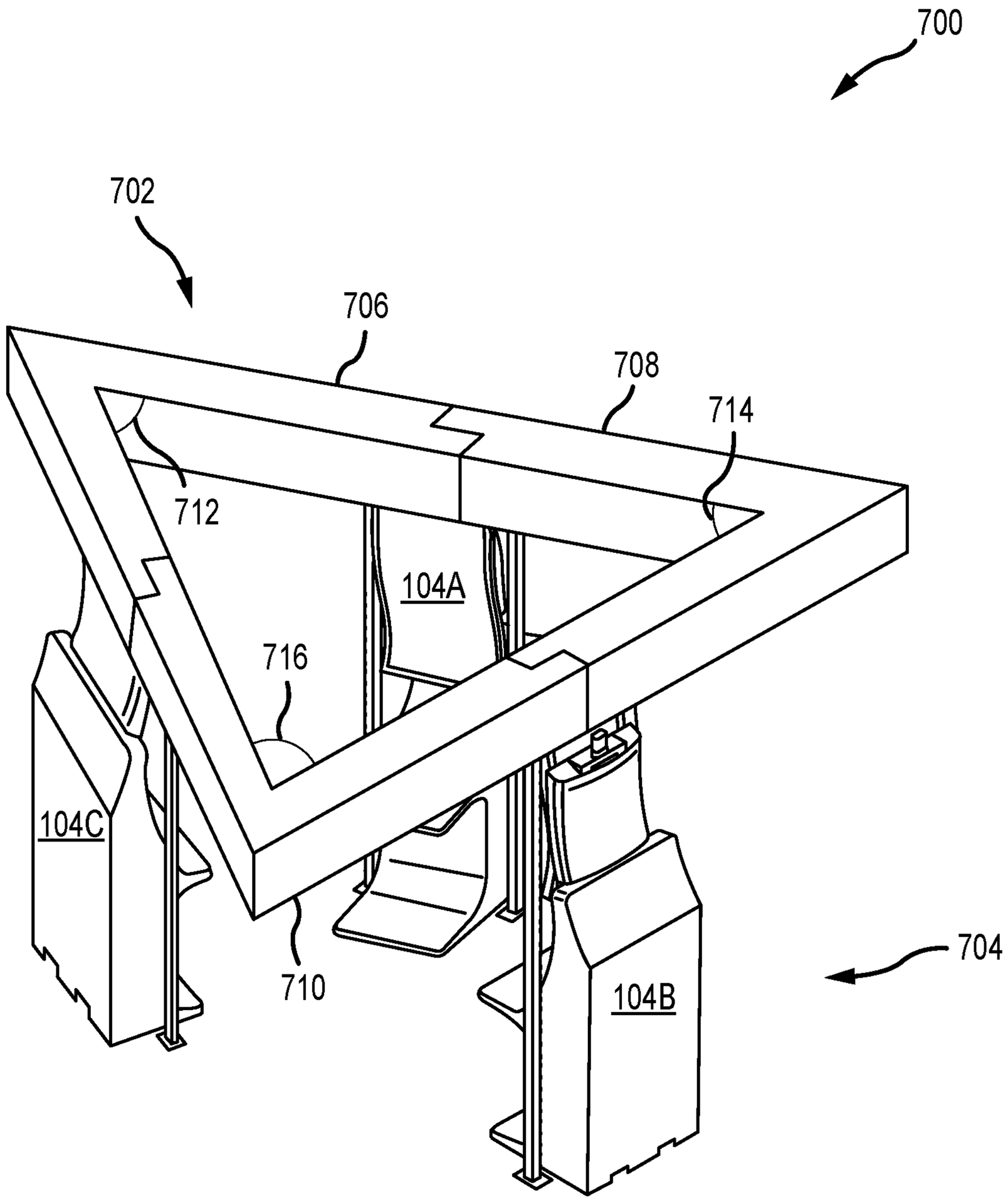


FIG.7

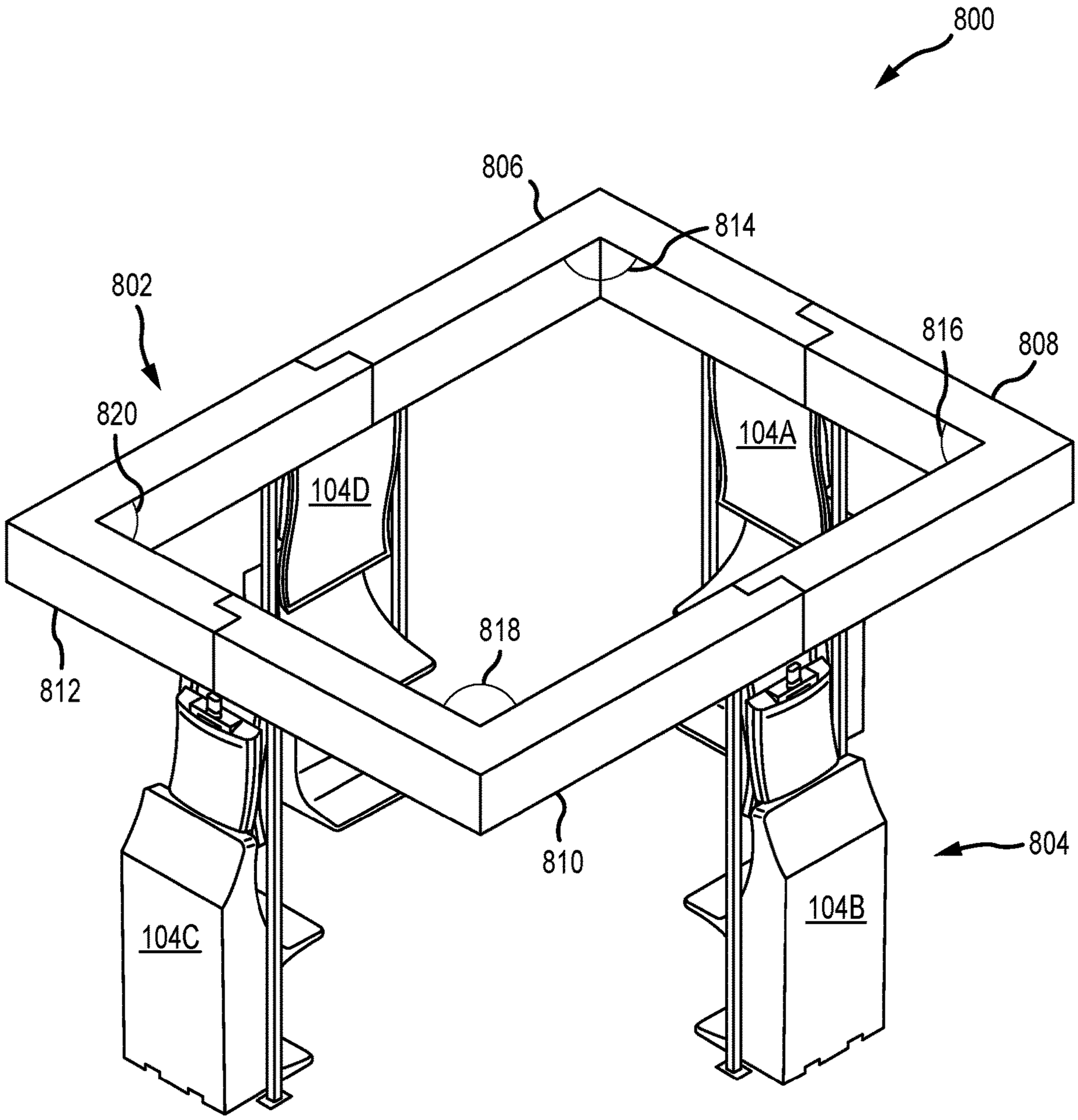


FIG.8

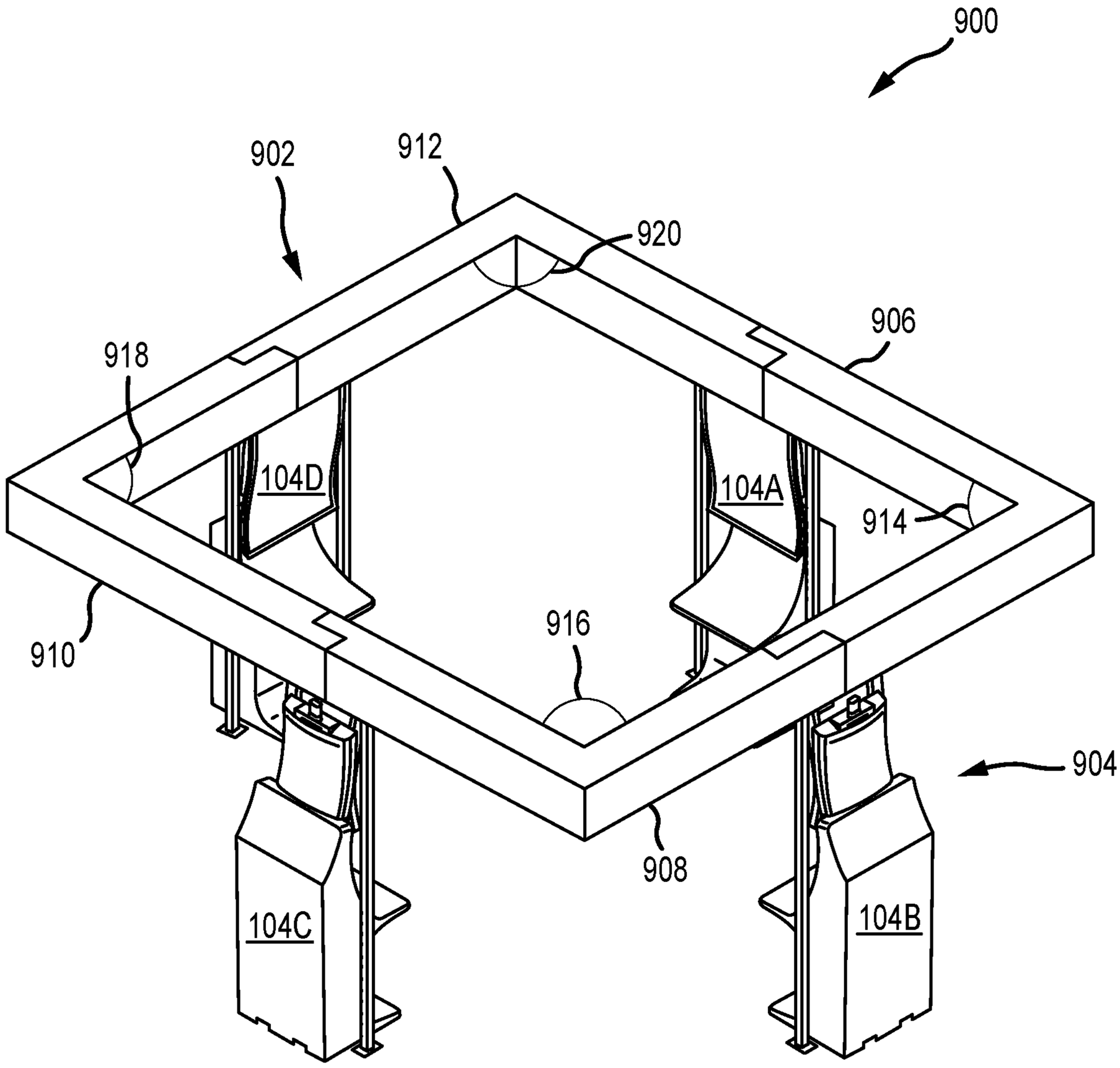


FIG.9

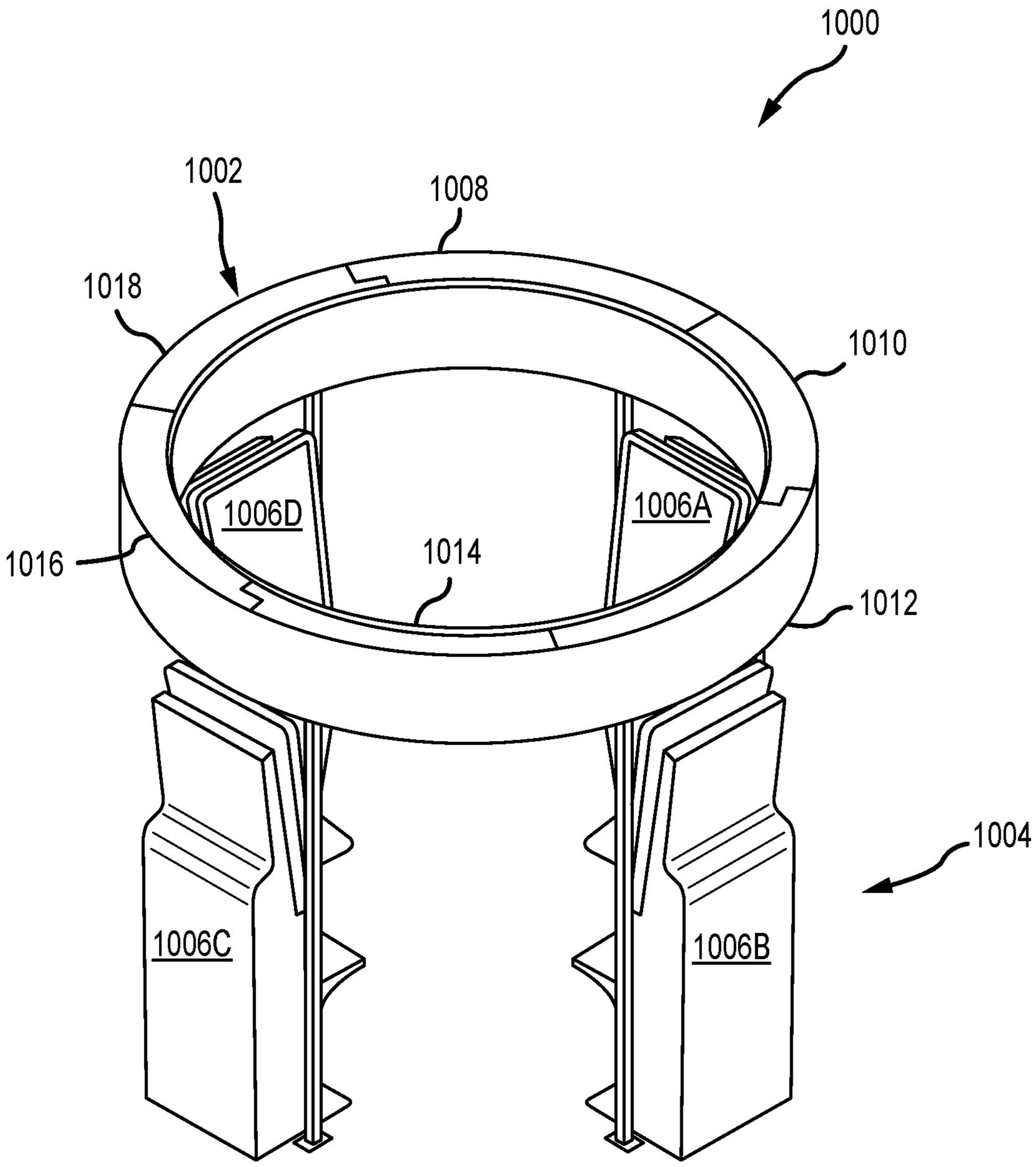

1000
1002
1008
1018
1010
1006D
1006A
1016
1014
1012
1004
1006C
1006B

FIG.10

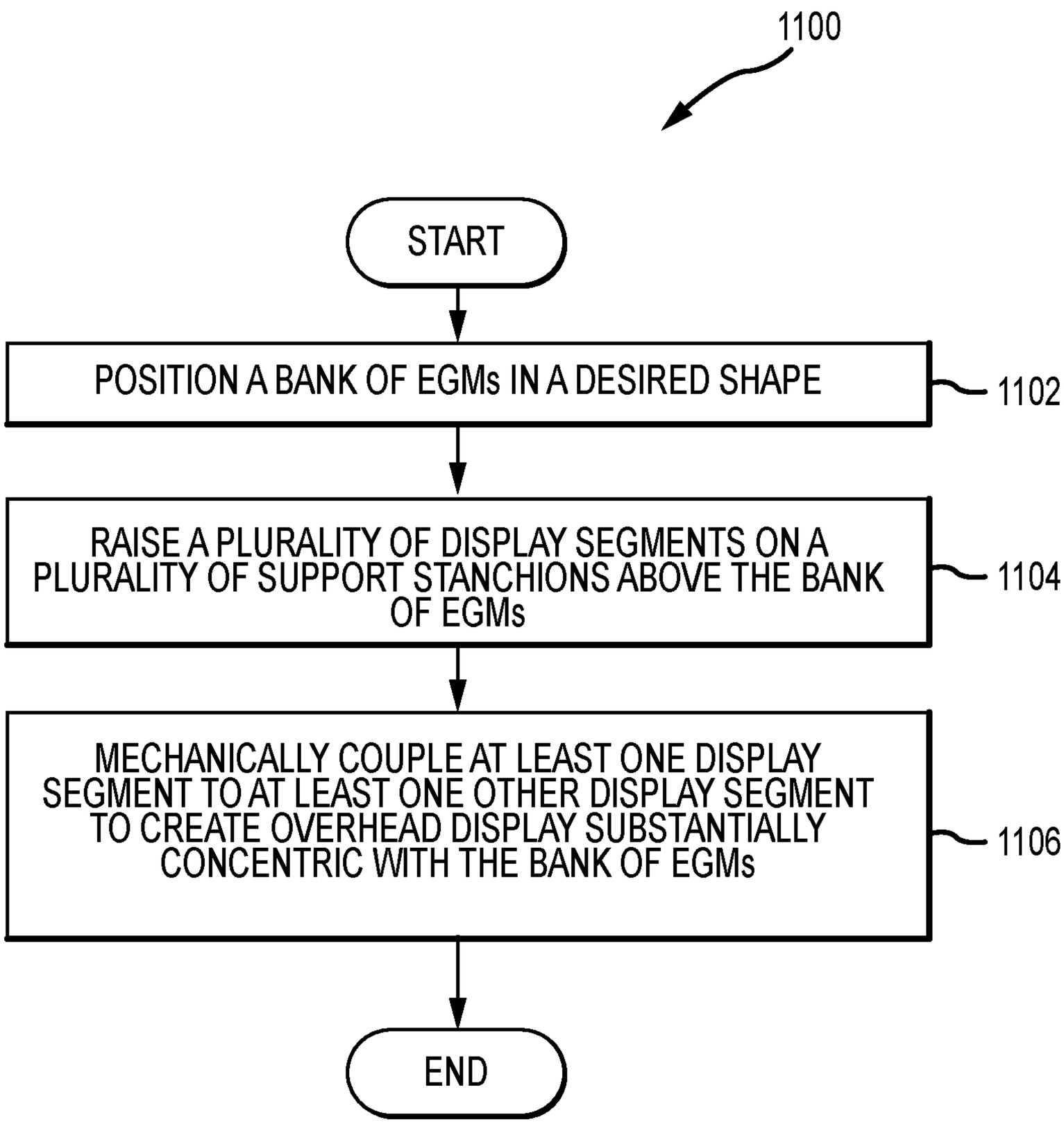

1100
START
POSITION A BANK OF EGMs IN A DESIRED SHAPE
1102
RAISE A PLURALITY OF DISPLAY SEGMENTS ON A PLURALITY OF SUPPORT STANCHIONS ABOVE THE BANK OF EGMs
1104
MECHANICALLY COUPLE AT LEAST ONE DISPLAY SEGMENT TO AT LEAST ONE OTHER DISPLAY SEGMENT TO CREATE OVERHEAD DISPLAY SUBSTANTIALLY CONCENTRIC WITH THE BANK OF EGMs
1106
END

FIG.11

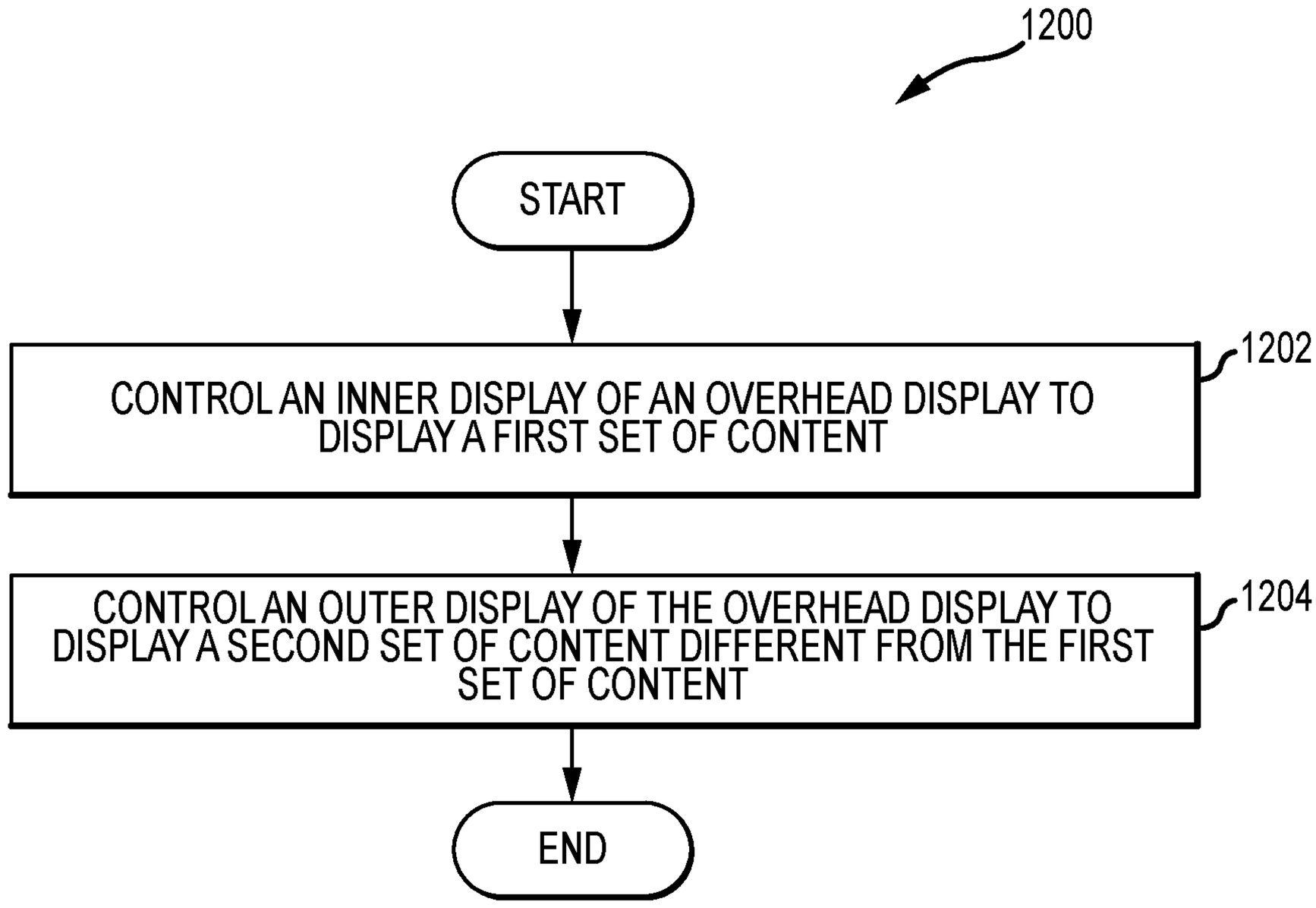

1200
START
CONTROL AN INNER DISPLAY OF AN OVERHEAD DISPLAY TO DISPLAY A FIRST SET OF CONTENT
1202
CONTROL AN OUTER DISPLAY OF THE OVERHEAD DISPLAY TO DISPLAY A SECOND SET OF CONTENT DIFFERENT FROM THE FIRST SET OF CONTENT
1204
END

FIG.12

OVERHEAD DISPLAY HAVING CONCENTRIC INNER AND OUTER DISPLAYS AND ASSOCIATED SYSTEMS AND METHODS

TECHNICAL FIELD

The field of disclosure relates generally to electronic gaming, and more particularly, to an overhead display configured to be mounted over a bank of electronic gaming machines, where the overhead display may be networked with the bank of electronic gaming machines and includes concentric inner and outer displays for displaying a variety of content from the bank of electronic gaming machines.

BACKGROUND

Electronic gaming machines (EGMs), or gaming devices, provide a variety of wagering games such as, for example, and without limitation, slot games, video poker games, video blackjack games, roulette games, video bingo games, keno games, and other types of games that are frequently offered at casinos and other locations. Play on EGMs typically involves a player establishing a credit balance by inserting or otherwise submitting money and placing a monetary wager (deducted from the credit balance) on one or more outcomes of an instance, or play, of a primary game, sometimes referred to as a base game. In many games, a player may qualify for secondary games or bonus rounds by attaining a certain winning combination or other triggering event in the base game. Secondary games provide an opportunity to win additional game instances, credits, awards, jackpots, progressives, etc. Awards from any winning outcomes are typically added back to the credit balance and can be provided to the player upon completion of a gaming session or when the player wants to "cash out."

Slot games are often displayed to the player in the form of various symbols arranged in a row-by-column grid, or "matrix," which may define a plurality of symbol positions, and which may be generated by spinning a plurality of reels, each of which may correspond to a respective column of the matrix. Specific matching combinations of symbols along predetermined paths, or paylines, drawn through the matrix indicate the outcome of the game. The display typically highlights winning combinations and outcomes for ready identification by the player. Matching combinations and their corresponding awards are usually shown in a "pay-table" that is available to the player for reference. Often, the player may vary his/her wager to included differing numbers of paylines and/or the amount bet on each line. By varying the wager, the player may sometimes alter the frequency or number of winning combinations, the frequency or number of secondary games, and/or the amount awarded.

Typical games use a random number generator (RNG) to randomly determine the outcome of each game. The game is designed to return a certain percentage of the amount wagered back to the player, referred to as return to player (RTP), over the course of many plays or instances of the game. The RTP and randomness of the RNG are fundamental to ensuring the fairness of the games and are therefore highly regulated. The RNG may be used to randomly determine the outcome of a game and symbols may then be selected that correspond to that outcome. Alternatively, the RNG may be used to randomly select the symbols whose resulting combinations determine the outcome. Notably,

some games may include an element of skill on the part of the player and are therefore not entirely random.

SUMMARY

In one aspect, an overhead display configured to be mounted over one or more electronic gaming machines is provided. The overhead display includes a plurality of display segments, where each display segment of the plurality of display segments is configured to mate with at least one other display segment. Each display segment includes an inner display panel and an outer display panel, where the outer display panel is spaced apart from and outward of the inner display panel.

In another aspect, an electronic gaming machine lounge is provided. The electronic gaming machine lounge includes a bank of electronic gaming machines, and an overhead display configured to be mounted over the bank of electronic gaming machines. The overhead display includes a plurality of arcuate display segments, where each arcuate display segment of the plurality of arcuate display segments is configured to mate with at least one other arcuate display segment. Each arcuate display segment includes an inner display panel defining an inner arc having an inner radius, and an outer display panel defining an outer arc having an outer radius, where the outer radius is greater than the inner radius, and where the outer display panel is spaced apart in a radially outwardly direction from the inner display panel.

In yet another aspect, a method for displaying content on a ring-shaped overhead display positioned over a bank of electronic gaming machines is provided. The method includes controlling an inner display of the overhead display to display a first set of content, and controlling an outer display of the overhead display to display a second set of content that is different from the first set of content, where the outer display is concentric with and spaced radially outwardly from the inner display.

BRIEF DESCRIPTION OF THE DRAWINGS

An example embodiment of the subject matter disclosed will now be described with reference to the accompanying drawings.

FIG. **1** is an example diagram showing several EGMs networked with various gaming-related servers;

FIG. **2** is a block diagram showing various functional elements of an example EGM;

FIG. **3** is a perspective view of an example electronic gaming machine lounge that includes an overhead display mounted over a bank of electronic gaming machines;

FIG. **4** is a top view of the example electronic gaming machine lounge shown in FIG. **3**;

FIG. **5** is a perspective view of the electronic gaming machine lounge shown in FIG. **3** and FIG. **4**, in which the electronic gaming machine lounge includes a privacy curtain;

FIG. **6** is a perspective view of another example electronic gaming machine lounge that includes an oval-shaped overhead display mounted over a bank of electronic gaming machines;

FIG. **7** is a perspective view of another example electronic gaming machine lounge that includes a triangle-shaped overhead display mounted over a bank of electronic gaming machines;

FIG. **8** is a perspective view of another example electronic gaming machine lounge that includes a rectangle-shaped overhead display mounted over a bank of electronic gaming machines;

FIG. **9** is a perspective view of another example electronic gaming machine lounge that includes a square-shaped overhead display mounted over a bank of electronic gaming machines;

FIG. **10** is a perspective view of an example kiosk gaming lounge that includes an overhead display mounted over a bank of gaming kiosks;

FIG. **11** is a flowchart illustrating an example process for assembling the electronic gaming machine lounge shown in FIGS. **3-9** and the kiosk gaming lounge shown in FIG. **10**; and

FIG. **12** is a flowchart illustrating an example process for displaying content on the overhead display of the electronic gaming machine lounge shown in FIGS. **3-9** and the kiosk gaming lounge shown in FIG. **10**.

DETAILED DESCRIPTION

An overhead display configured to be mounted over a bank of electronic gaming machines is described. The overhead display may be assembled from a plurality of arcuate display segments, where each arcuate display segment includes an inner display panel and an outer display panel spaced radially outward of the inner display panel and extending substantially coaxially with the inner display panel about a common center axis. Once assembled, the overhead display is ring-shaped and includes an inner display and an outer display formed from the plurality of arcuate display segments.

In operation, a variety of content may be provided to the inner and outer displays of the overhead display. For example, a first set of content may be provided to the inner display, and a second set of content (which may be different from or the same as the first set of content) may be provided to the outer display. In one example, a first set of content, such as a tournament leaderboard, may be display on respective inner display panels of the inner display, while more generalized content, such as a tournament game attract mode animation or graphic, may be display on one or more outer display panels of the out display. In another embodiment, content is transferred using an animation effect, such as a lightning strike, between one or more EGMs positioned under the overhead display and the inner and/or outer displays of the overhead display to create a variety of content delivery and display effects.

FIG. **1** illustrates several different models of EGMs which may be networked to various gaming related servers. Shown is a system **100** in a gaming environment including one or more server computers **102** (e.g., slot servers of a casino) that are in communication, via a communications network, with one or more gaming devices **104**A-**104**X (EGMs, slots, video poker, bingo machines, etc.) that can implement one or more aspects of the present disclosure. The gaming devices **104**A-**104**X may alternatively be portable and/or remote gaming devices such as, but not limited to, a smart phone, a tablet, a laptop, or a game console, although such devices may require specialized software and/or hardware to comply with regulatory requirements regarding devices used for wagering or games of chance in which monetary awards are provided.

Communication between the gaming devices **104**A-**104**X and the server computers **102**, and among the gaming devices **104**A-**104**X, may be direct or indirect, such as over the Internet through a web site maintained by a computer on a remote server or over an online data network including commercial online service providers, Internet service providers, private networks, and the like. In other embodiments, the gaming devices **104**A-**104**X may communicate with one another and/or the server computers **102** over RF, cable TV, satellite links and the like.

In some embodiments, server computers **102** may not be necessary and/or preferred. For example, in one or more embodiments, a stand-alone gaming device such as gaming device **104**A, gaming device **104**B or any of the other gaming devices **104**C-**104**X can implement one or more aspects of the present disclosure. However, it is typical to find multiple EGMs connected to networks implemented with one or more of the different server computers **102** described herein.

The server computers **102** may include a central determination gaming system server **106**, a ticket-in-ticket-out (TITO) system server **108**, a player tracking system server **110**, a progressive system server **112**, and/or a casino management system server **114**. Gaming devices **104**A-**104**X may include features to enable operation of any or all servers for use by the player and/or operator (e.g., the casino, resort, gaming establishment, tavern, pub, etc.). For example, game outcomes may be generated on a central determination gaming system server **106** and then transmitted over the network to any of a group of remote terminals or remote gaming devices **104**A-**104**X that utilize the game outcomes and display the results to the players.

Gaming device **104**A is often of a cabinet construction which may be aligned in rows or banks of similar devices for placement and operation on a casino floor. The gaming device **104**A often includes a main door **154** which provides access to the interior of the cabinet. Gaming device **104**A typically includes a button area or button deck **120** accessible by a player that is configured with input switches or buttons **122**, an access channel for a bill validator **124**, and/or an access channel for a ticket-out printer **126**.

In FIG. **1**, gaming device **104**A is shown as a Relm XL™ model gaming device manufactured by Aristocrat® Technologies, Inc. As shown, gaming device **104**A is a reel machine having a gaming display area **118** comprising a number (typically 3 or 5) of mechanical reels **130** with various symbols displayed on them. The reels **130** are independently spun and stopped to show a set of symbols within the gaming display area **118** which may be used to determine an outcome to the game.

In many configurations, the gaming machine **104**A may have a main display **128** (e.g., video display monitor) mounted to, or above, the gaming display area **118**. The main display **128** can be a high-resolution LCD, plasma, LED, or OLED panel which may be flat or curved as shown, a cathode ray tube, or other conventional electronically controlled video monitor.

In some embodiments, the bill validator **124** may also function as a "ticket-in" reader that allows the player to use a casino issued credit ticket to load credits onto the gaming device **104**A (e.g., in a cashless ticket ("TITO") system). In such cashless embodiments, the gaming device **104**A may also include a "ticket-out" printer **126** for outputting a credit ticket when a "cash out" button is pressed. Cashless TITO systems are well known in the art and are used to generate and track unique bar-codes or other indicators printed on tickets to allow players to avoid the use of bills and coins by loading credits using a ticket reader and cashing out credits using a ticket-out printer **126** on the gaming device **104**A. The gaming machine **104**A can have hardware meters for purposes including ensuring regulatory compliance and monitoring the player credit balance. In addition, there can be additional meters that record the total amount of money wagered on the gaming machine, total amount of money

deposited, total amount of money withdrawn, total amount of winnings on gaming device **104**A.

In some embodiments, a player tracking card reader **144**, a transceiver for wireless communication with a player's smartphone, a keypad **146**, and/or an illuminated display **148** for reading, receiving, entering, and/or displaying player tracking information is provided in EGM **104**A. In such embodiments, a game controller within the gaming device **104**A can communicate with the player tracking system server **110** to send and receive player tracking information.

Gaming device **104**A may also include a bonus topper wheel **134**. When bonus play is triggered (e.g., by a player achieving a particular outcome or set of outcomes in the primary game), bonus topper wheel **134** is operative to spin and stop with indicator arrow **136** indicating the outcome of the bonus game. Bonus topper wheel **134** is typically used to play a bonus game, but it could also be incorporated into play of the base or primary game.

A candle **138** may be mounted on the top of gaming device **104**A and may be activated by a player (e.g., using a switch or one of buttons **122**) to indicate to operations staff that gaming device **104**A has experienced a malfunction or the player requires service. The candle **138** is also often used to indicate a jackpot has been won and to alert staff that a hand payout of an award may be needed.

There may also be one or more information panels **152** which may be a back-lit, silkscreened glass panel with lettering to indicate general game information including, for example, a game denomination (e.g., $0.25 or $1), pay lines, pay tables, and/or various game related graphics. In some embodiments, the information panel(s) **152** may be implemented as an additional video display.

Gaming devices **104**A have traditionally also included a handle **132** typically mounted to the side of main cabinet **116** which may be used to initiate game play.

Many or all the above described components can be controlled by circuitry (e.g., a gaming controller) housed inside the main cabinet **116** of the gaming device **104**A, the details of which are shown in FIG. **2**.

Note that not all gaming devices suitable for implementing embodiments of the present disclosure necessarily include top wheels, top boxes, information panels, cashless ticket systems, and/or player tracking systems. Further, some suitable gaming devices have only a single game display that includes only a mechanical set of reels and/or a video display, while others are designed for bar counters or table tops and have displays that face upwards.

An alternative example gaming device **104**B illustrated in FIG. **1** is the Arc model gaming device manufactured by Aristocrat® Technologies, Inc. Note that where possible, reference numerals identifying similar features of the gaming device **104**A embodiment are also identified in the gaming device **104**B embodiment using the same reference numbers. Gaming device **104**B does not include physical reels and instead shows game play functions on main display **128**. An optional topper screen **140** may be used as a secondary game display for bonus play, to show game features or attraction activities while a game is not in play, or any other information or media desired by the game designer or operator. In some embodiments, topper screen **140** may also or alternatively be used to display progressive jackpot prizes available to a player during play of gaming device **104**B.

Example gaming device **104**B includes a main cabinet **116** including a main door **154** which opens to provide access to the interior of the gaming device **104**B. The main or service door **154** is typically used by service personnel to refill the ticket-out printer **126** and collect bills and tickets inserted into the bill validator **124**. The main or service door **154** may also be accessed to reset the machine, verify and/or upgrade the software, and for general maintenance operations.

Another example gaming device **104**C shown is the Helix™ model gaming device manufactured by Aristocrat® Technologies, Inc. Gaming device **104**C includes a main display **128**A that is in a landscape orientation. Although not illustrated by the front view provided, the landscape display **128**A may have a curvature radius from top to bottom, or alternatively from side to side. In some embodiments, display **128**A is a flat panel display. Main display **128**A is typically used for primary game play while secondary display **128**B is typically used for bonus game play, to show game features or attraction activities while the game is not in play or any other information or media desired by the game designer or operator. In some embodiments, example gaming device **104**C may also include speakers **142** to output various audio such as game sound, background music, etc.

Many different types of games, including mechanical slot games, video slot games, video poker, video black jack, video pachinko, keno, bingo, and lottery, may be provided with or implemented within the depicted gaming devices **104**A-**104**C and other similar gaming devices. Each gaming device may also be operable to provide many different games. Games may be differentiated according to themes, sounds, graphics, type of game (e.g., slot game vs. card game vs. game with aspects of skill), denomination, number of paylines, maximum jackpot, progressive or non-progressive, bonus games, and may be deployed for operation in Class 2 or Class 3, etc.

FIG. **2** is a block diagram depicting exemplary internal electronic components of a gaming device **200** connected to various external systems. All or parts of the example gaming device **200** shown could be used to implement any one of the example gaming devices **104**A-X depicted in FIG. **1**. The games available for play on the gaming device **200** are controlled by a game controller **202** that includes one or more processors **204** and a game that may be stored as game software or a program **206** in a memory **208** coupled to the processor **204**. The memory **208** may include one or more mass storage devices or media that are housed within gaming device **200**. Within the mass storage devices and/or memory **208**, one or more databases **210** may be provided for use by the program **206**. A random number generator (RNG) **212** that can be implemented in hardware and/or software is typically used to generate random numbers that are used in the operation of game play to ensure that game play outcomes are random and meet regulations for a game of chance.

Alternatively, a game instance (i.e. a play or round of the game) may be generated on a remote gaming device such as a central determination gaming system server **106** (not shown in FIG. **2** but see FIG. **1**). The game instance is communicated to gaming device **200** via the network **214** and then displayed on gaming device **200**. Gaming device **200** may execute game software, such as but not limited to video streaming software that allows the game to be displayed on gaming device **200**. When a game is stored on gaming device **200**, it may be loaded from a memory **208** (e.g., from a read only memory (ROM)) or from the central determination gaming system server **106** to memory **208**. The memory **208** may include RAM, ROM or another form of storage media that stores instructions for execution by the

processor **204**. Note that embodiments of the present disclosure represent an improvement in the art of EGM software and provide new technology in that they facilitate a variety of content delivery effects between one or more EGMs **104**A-**104**X and an inner and/or outer display of an overhead display. These embodiments are thus not merely new game rules or simply a new display pattern.

The gaming device **200** may include a topper display **216** or another form of a top box (e.g., a topper wheel, a topper screen, etc.) which sits above cabinet **218**. The cabinet **218** or topper display **216** may also house a number of other components which may be used to add features to a game being played on gaming device **200**, including speakers **220**, a ticket printer **222** which prints bar-coded tickets or other media or mechanisms for storing or indicating a player's credit value, a ticket reader **224** which reads bar-coded tickets or other media or mechanisms for storing or indicating a player's credit value, and a player tracking interface **232**. The player tracking interface **232** may include a keypad **226** for entering information, a player tracking display **228** for displaying information (e.g., an illuminated or video display), a card reader **230** for receiving data and/or communicating information to and from media or a device such as a smart phone enabling player tracking. Ticket printer **222** may be used to print tickets for a TITO system server **108**. The gaming device **200** may further include a bill validator **234**, player-input buttons **236** for player input, cabinet security sensors **238** to detect unauthorized opening of the cabinet **218**, a primary game display **240**, and a secondary game display **242**, each coupled to and operable under the control of game controller **202**.

Gaming device **200** may be connected over network **214** to player tracking system server **110**. Player tracking system server **110** may be, for example, an OASIS® system manufactured by Aristocrat® Technologies, Inc. Player tracking system server **110** is used to track play (e.g. amount wagered, games played, time of play and/or other quantitative or qualitative measures) for individual players so that an operator may reward players in a loyalty program. The player may use the player tracking interface **232** to access his/her account information, activate free play, and/or request various information. Player tracking or loyalty programs seek to reward players for their play and help build brand loyalty to the gaming establishment. The rewards typically correspond to the player's level of patronage (e.g., to the player's playing frequency and/or total amount of game plays at a given casino). Player tracking rewards may be complimentary and/or discounted meals, lodging, entertainment and/or additional play. Player tracking information may be combined with other information that is now readily obtainable by a casino management system.

Gaming devices, such as gaming devices **104**A-**104**X, **200**, are highly regulated to ensure fairness and, in many cases, gaming devices **104**A-**104**X, **200** are operable to award monetary awards (e.g., typically dispensed in the form of a redeemable voucher). Therefore, to satisfy security and regulatory requirements in a gaming environment, hardware and software architectures are implemented in gaming devices **104**A-**104**X, **200** that differ significantly from those of general-purpose computers. Adapting general purpose computers to function as gaming devices **200** is not simple or straightforward because of: 1) the regulatory requirements for gaming devices **200**, 2) the harsh environment in which gaming devices **200** operate, 3) security requirements, 4) fault tolerance requirements, and 5) the requirement for additional special purpose componentry enabling functionality of an EGM. These differences require substantial engineering effort with respect to game design implementation, hardware components and software.

When a player wishes to play the gaming device **200**, he/she can insert cash or a ticket voucher through a coin acceptor (not shown) or bill validator **234** to establish a credit balance on the gamine machine. The credit balance is used by the player to place wagers on instances of the game and to receive credit awards based on the outcome of winning instances. The credit balance is decreased by the amount of each wager and increased upon a win. The player can add additional credits to the balance at any time. The player may also optionally insert a loyalty club card into the card reader **230**. During the game, the player views the game outcome on one or more of the primary game display **240** and secondary game display **242**. Other game and prize information may also be displayed.

For each game instance, a player may make selections, which may affect play of the game. For example, the player may vary the total amount wagered by selecting the amount bet per line and the number of lines played. In many games, the player is asked to initiate or select options during course of game play (such as spinning a wheel to begin a bonus round or select various items during a feature game). The player may make these selections using the player-input buttons **236**, the primary game display **240** which may be a touch screen, or using some other device which enables a player to input information into the gaming device **200**.

During certain game events, the gaming device **200** may display visual and auditory effects that can be perceived by the player. These effects add to the excitement of a game, which makes a player more likely to enjoy the playing experience. Auditory effects include various sounds that are projected by the speakers **220**. Visual effects include flashing lights, strobing lights or other patterns displayed from lights on the gaming device **200** or from lights behind the information panel **152** (FIG. **1**).

When the player is done, he/she cashes out the credit balance (typically by pressing a cash out button to receive a ticket from the ticket printer **222**). The ticket may be "cashed-in" for money or inserted into another machine to establish a credit balance for play.

FIG. **3** is a perspective view of an example electronic gaming machine lounge **300** (or EGM lounge). In the example embodiment, EGM lounge **300** includes an overhead display **302** mounted over a bank of electronic gaming machines (EGMs) **304**. Although overhead display **302** is primarily described herein as being mounted over a bank of EGMs **304**, in some embodiments, overhead display **302** may be mounted over a single EGM **104**A-**104**D (or "kiosk") and/or over any other casino gaming device, such as an ATM machine within a casino, a digital display or digital signage within a casino, and the like.

For example, in at least one embodiment, bank of EGMs **304** includes a plurality of EGMs **104**A-**104**X arranged in a ring-shape and oriented such that a gaming display area **118** of each EGM **104**A-**104**X faces inward toward a center or interior portion **301** of the ring-shape, where interior portion **301** of the ring of EGMs **104**A-**104**X may be regarded as a lounge area. Each EGM **104**A-**104**X may also be spaced concentrically apart from an adjacent EGM **104**A-**104**X positioned to either side thereof to define an entrance or opening into interior portion **301**. The entrance or opening between EGMs **104**A-**104**X may be sized to accommodate entrance by a player into the lounge area. In the illustrated embodiment, EGM lounge **300** includes four EGMs **104**A-

104D. However, it will be appreciated that any suitable number of EGMs 104A-104X may be included in EGM lounge 300.

In at least some embodiments, EGMs 104A-104D may be positioned at approximately ninety degree intervals, such that a gaming display area 118 of a first EGM 104A faces a gaming display area 118 of a second EGM 104B disposed diametrically opposite the second EGM 104B. Similarly, a gaming display area 118 of a third EGM 104C may face a gaming display area 118 of a fourth EGM 104D disposed diametrically opposite the third EGM 104C. Thus, a player seated or standing to play a game on any of EGMs 104A-104D may be positioned, as a result of the diametrically opposite positioning of EGMs 104A-104D, in a manner that discourages viewing of any other player's EGM 104A-104D within EGM lounge 300. In other words, EGMs 104A-104D are positioned at ninety degree intervals to facilitate privacy within EGM lounge 300.

As described herein, EGMs 104A-104D within EGM lounge 300 may include an independent game controller 202 (that includes one or more processors 204) and a memory 208 coupled to the processor 204 that stores one or more games or game programs 206. EGMs 104A-104D may also be networked and capable of communicating with one another, such as, for example, through a server system, to facilitate gameplay. For example, in at least one embodiment, EGMs 104A-104D are networked through any of servers 106-112. Likewise, in at least some embodiments, EGMs 104A-104D are networked, as described, to accommodate a tournament game, which may be joined and played using any of EGMs 104A-104D within EGM lounge 300. In simpler terms, EGM lounge 300 may be configured to facilitate a tournament game, where players participate in the tournament game from any of the EGMs 104A-104D within EGM lounge 300.

As described briefly above, EGM lounge 300 also includes an overhead display 302 configured, as described herein, to be mounted over bank of EGMs 304. In the example embodiment, overhead display 302 includes a ring-shaped inner display 303 and a concentric outer display 305 formed from a plurality of arcuate display segments, such as a first arcuate display segment 306, a second arcuate display segment 308, a third arcuate display segment 310, a fourth arcuate display segment 312, a fifth arcuate display segment 314, and a sixth arcuate display segment 316.

In other embodiments, overhead display 302 may define another shape, such as an oval-shape, a polyhedral-shape, and/or any other suitable shape. Likewise, in some embodiments, bank of EGMs 304 may also be arranged in another shape, such as, for example, an oval-shape or a polyhedral-shape, to align under a similarly shaped overhead display 302.

Briefly, FIG. 4 shows a top view of EGM lounge 300 and illustrates the relative position of each arcuate display segment 306-316. Accordingly, and as shown, each arcuate display segment 306-316 spans approximately sixty degrees of a circle (such that, when assembled together as described herein, arcuate display segments 306-316 complete a full three-hundred-and-sixty degree ring or circular shape for overhead display 302). Although six arcuate display segments 306-316 are described, it will be appreciated that overhead display 302 may be divided into any suitable number of arcuate display segments.

Although each arcuate display segment 306-316 is shown to span approximately sixty degrees of a circle, it will be appreciated that an arcuate display segment may span any portion of a circle, depending, for example, upon a total number of arcuate display segments making up overhead sign 302. For instance, if overhead display 302 is formed from two arcuate display segments, each arcuate display segment may span one-hundred-and-eighty degrees. More generally, it is contemplated that an arcuate display segment may span anywhere in the range of ten to one-hundred-and-eighty-degrees.

With returning reference to FIG. 3, each arcuate display segment 306-316 may include an inner display panel and an outer display panel spaced apart from and generally concentric with the inner display panel. For example, as best shown with reference to the enlarged view of second arcuate display segment 308 (shown in FIG. 3), each arcuate display segment 306-316 may, like second arcuate display segment 308, include an inner display panel 318 and an outer display panel 320. Inner display panel 318 may define an inner arc 322 having an inner arc radius, R_1. Likewise, outer display panel 320 may define an outer arc 324 having an outer arc radius, R_2. Further, as shown, outer display panel 320 is spaced radially apart from and outward of inner display panel 318, and outer arc radius, R_2, is greater than inner arc radius, R_1. As a result, outer display panel 320 and inner display panel 318 extend substantially coaxially about a common center axis 324 or center point.

In addition, each arcuate display segment 306-316 includes a first end and a second end. For example, as best shown with reference to the enlarged view of second arcuate display segment 308 (shown in FIG. 3), each arcuate display segment 306-316 includes, like second arcuate display segment 308, a first end 326 and a second end 328. First end 326 includes a first engagement surface 330, and second end 328 includes a second engagement surface 332. As described herein, each engagement surface 330 and 332 is configured to mate with (e.g., mechanically and/or electrically engage with) an engagement surface of an adjacent arcuate display segment 306-316. Thus, arcuate display segments 306-316 may be mechanically assembled in a ring-shape to create overhead display 302.

In the example embodiment, each arcuate display segment 306-316 may also include a display controller (e.g., at least a processor and a memory) configured to control graphics or video displayed on the arcuate display segment 306-316. In other embodiments, only one arcuate display segment 306-316 includes a display controller. In such an embodiment, the display controller may control graphics or video display on each of the arcuate display segments 306-316. To this end, in at least some embodiments, each arcuate display segment 306-316 is also configured to be electrically or communicatively coupled to at least one other arcuate display segment 306-316 (e.g., via one or more electrical connectors) of overhead display.

Likewise, in at least some embodiments, one or more arcuate display segments 306-316 may include a data input port (e.g., a USB port) configured to receive a memory device (e.g., flash memory, such as a thumb-drive). The flash memory may include content for display on one or more display segments 306-316, and a processor or controller of one or more arcuate display segments 306-316 may read the flash memory to retrieve, process, and/or display the content stored thereon.

Likewise, in at least some embodiments, each arcuate display segment 306-316 may be electrically or communicatively coupled to one or more EGMs 104A-104D (e.g., game controllers 202 of each EGM 104A-104D). For example, each arcuate display segment 306-316 may be communicatively coupled to one or more EGMs 104A-104D of bank of EGMs 304. In such an embodiment, each EGM

14A-104D may directly control content displayed on any of arcuate display segments **306-316**. For example, an EGM **104**A-**104**D may include a media controller, which may function to provide content to one or more arcuate display segments **306-316**. Similarly, as described elsewhere herein, in at least some embodiments, content may provided to overhead display **302** from one or more server systems.

To assemble overhead display **302**, each arcuate display segment **306-316** is mechanically coupled to an adjacent arcuate display segment **306-316** at a respective first end and a respective second end (such as first end **326** and second end **328** of second arcuate display segment **308**, as described above). Specifically, engagement surfaces (such as engagement surfaces **330** and **332**) mate with and mechanically couple to the engagement surfaces of adjacent arcuate display segments **306-316**. As described herein, adjacent arcuate display segments **306-316** may also be electrically and/or communicatively coupled.

Thus, first arcuate display segment **306** couples to second arcuate display segment **308** and sixth arcuate display segment **316**. Likewise, second arcuate display segment **308** couples to first arcuate display segment **306** and third arcuate display segment **310**. Third arcuate display segment **310** couples to second arcuate display segment **308** and fourth arcuate display segment **312**. Fourth arcuate display segment **312** couples to third arcuate display segment **310** and fifth arcuate display segment **314**. Fifth arcuate display segment **314** couples to fourth arcuate display segment **312** and sixth arcuate display segment **316**. Sixth arcuate display segment **316** couples to fifth arcuate display segment **314** and first arcuate display segment **306**.

In the final assembly, the inner display panels of each arcuate display segment **306-316** fit together to form inner display **303** of overhead display **302**. Likewise, the outer display panels of each arcuate display segment **306-316** fit together to form outer display **305** of overhead display **302**.

Overhead display **302** is also supported on a plurality of posts or support stanchions, such as, for example, a first support stanchion **334**, a second support stanchion **336**, a third support stanchion **338**, a fourth support stanchion **340**, a fifth support stanchion **342**, and a sixth support stanchion **344**. Although six support stanchions **334-344** are described, it will be appreciated that any suitable number of support stanchions may be implemented. Further, although six support stanchions **334-344** are described herein, it will be appreciated that any suitable number of support stanchions may be used. In some embodiments, overhead display **302** may be supported by bank of EGMs **304** and/or by one or more EGMs **104**A-**104**D directly. In other embodiments, overhead display **302** may be suspended from a ceiling surface, such as by one or more wires or suspension cables.

In the example embodiment, each support stanchion **334-344** mechanically couples to and supports a respective arcuate display segment **306-316**. Hence, there are six support stanchions **334-344**, one for each arcuate display segment **306-316**. However, in other embodiments, pairs or groups of arcuate display segments **306-316** may be raised and supported by a single support stanchion **334-344**.

Further, each support stanchion **334-344** may attached to a respective arcuate display segment **306-316** at a location that facilitates raising and lowering the arcuate display segment **306-316** independently of other arcuate display segments **306-316**. For example, each support stanchion **334-344** may mechanically couple to an arcuate display segment **306-316** substantially at a midpoint under the arcuate display segment **306-316**.

To raise and lower each arcuate display segment **306-316** on a respective support stanchion **334-344**, an electromechanical actuator may be engaged with each support stanchion **334-344**. For example, in at least some embodiments, each support stanchion **334-344** may include a telescoping body capable of engagement by a linear actuator. The linear actuator may engage and drive the telescoping body through a range of linear motion to raise and lower a respective arcuate display segment **306-316** on the support stanchion **334-344**.

In other embodiments, overhead display **302** may be assembled in a ring shape, as described herein, substantially at floor level, lifted by one or more casino operators onto a lowered (i.e., non-telescoped) plurality of support stanchions **334-344**, mechanically coupled to the support stanchions **334-344**, and raised above floor level thereafter. Thus, arcuate display segments **306-316** may be raised and lowered in more than one way.

FIG. **5** is a perspective view of EGM lounge **300**, in which EGM lounge **300** includes a privacy curtain **502**. Specifically, as shown, privacy curtain **502** may attached to a portion of overhead display **302** and descend from overhead display **302** substantially to floor level. As a result, privacy curtain **502** may be added to EGM lounge **300** to provide privacy to players within EGM lounge **300**. Privacy curtain **502** may, in addition, obscure the inner display panels of arcuate display segments **306-316** from the exterior of EGM lounge **300**. Thus, a casino patron located outside EGM lounge **300** may be able to view content displayed out the outer display panels of arcuate display segments **306-316** but may not be able to see content displayed on the inner display panels.

In various embodiments, an overhead display may be any suitable shape, such as, for example, any suitable shape other than the ring or circular shape described above. For example, as described herein, an overhead display may include any other curved or polyhedral shape. Examples include, but are not limited to, an oval-shape, a triangle-shape, a rectangle-shape, a square-shape, a hexagon shape, an octagon shape, and the like. Several such shapes are illustrated with reference to FIGS. **6-9**, as described below.

Accordingly, FIG. **6** is a perspective view of an example electronic gaming machine lounge **600** that includes an oval-shaped overhead display **602** mounted over a bank of electronic gaming machines **604**. In this example, overhead display **602** is formed from a plurality of arcuate display segments **606**, **608**, **610**, **612**, **614**, **616**, and **618**. As described herein, each arcuate display segment may include an inner display panel and an outer display panel and may mate with or couple to another arcuate display segment **606-618** at an edge or engagement surface thereof, whereby oval-shaped overhead display **602** may be formed. Further, each EGM **104**A-**104**D of bank of electronic gaming machines **604** may be positioned in a shape or arrangement on a casino floor underneath oval-shaped overhead display **602** to give electronic gaming machine lounge **600** an overall oval-shape.

Likewise, FIG. **7** is a perspective view of another example electronic gaming machine lounge **700** that includes a triangle-shaped overhead display **702** mounted over a bank of electronic gaming machines **704**. In this example, overhead display **702** is formed from a plurality of angled display segments **706**, **708**, and **710**. Specifically, as shown, each angled display segment **706**, **708**, and **710** may include a respective corner or angle **712**, **714**, and **716**, respectively. However, in other embodiments, overhead display **702** may be formed from a plurality of straight segments, which may

be mechanically coupled, as described herein, to give overhead display **702** a triangle-shape.

In addition, as described herein, each angled (or straight) display segment **706-710** may include an inner display panel and an outer display panel and may mate with or couple to another angled (or straight) display segment **706-710** at an edge or engagement surface thereof, whereby triangle-shaped overhead display **702** may be formed. Further, each EGM **104**A-**104**C of bank of electronic gaming machines **704** may be positioned in a shape or arrangement on a casino floor underneath triangle-shaped overhead display **702** to give electronic gaming machine lounge **700** an overall oval-shape.

FIG. **8** is a perspective view of another example electronic gaming machine lounge **800** that includes a rectangle-shaped overhead display **802** mounted over a bank of electronic gaming machines **804**. In this example, overhead display **802** is formed from a plurality of angled display segments **806**, **808**, **810**, and **812**. Specifically, as shown, each angled display segment **806**, **808**, **810**, and **812** may include a respective corner or angle **814**, **816**, **818**, and **820**, respectively. However, in other embodiments, overhead display **802** may be formed from a plurality of straight segments, which may be mechanically coupled, as described herein, to give overhead display **802** a rectangle-shape.

In addition, as described herein, each angled (or straight) display segment **806-812** may include an inner display panel and an outer display panel and may mate with or couple to another angled (or straight) display segment **806-812** at an edge or engagement surface thereof, whereby rectangle-shaped overhead display **802** may be formed. Further, each EGM **104**A-**104**D of bank of electronic gaming machines **804** may be positioned in a shape or arrangement on a casino floor underneath rectangle-shaped overhead display **802** to give electronic gaming machine lounge **800** an overall rectangle-shape.

FIG. **9** is a perspective view of another example electronic gaming machine lounge **900** that includes a square-shaped overhead display **902** mounted over a bank of electronic gaming machines **904**. In this example, overhead display **902** is formed from a plurality of angled display segments **906**, **908**, **910**, and **912**. Specifically, as shown, each angled display segment **906**, **908**, **910**, and **912** may include a respective corner or angle **914**, **916**, **918**, and **920**, respectively. However, in other embodiments, overhead display **902** may be formed from a plurality of straight segments, which may be mechanically coupled, as described herein, to give overhead display **902** a square-shape.

In addition, as described herein, each angled (or straight) display segment **906-912** may include an inner display panel and an outer display panel and may mate with or couple to another angled (or straight) display segment **906-912** at an edge or engagement surface thereof, whereby square-shaped overhead display **902** may be formed. Further, each EGM **104**A-**104**D of bank of electronic gaming machines **904** may be positioned in a shape or arrangement on a casino floor underneath square-shaped overhead display **902** to give electronic gaming machine lounge **900** an overall square-shape.

FIG. **10** is a perspective view of an example kiosk gaming lounge **1000** that includes an overhead display **1002** mounted over a bank of gaming kiosks **1004**. Kiosk gaming lounge **1000** may be substantially identical to any of the EGM lounges **300-900** described herein, with the exception that bank of EGMs **104**A-**104**X may be replaced by a plurality of gaming kiosks **1006**A-**1006**D, where a kiosk **1006**A-**1006**D may, as described herein, function to permit a player to check or recharge a credit balance associated with a player tracking account and/or perform a variety of other player and game related tasks. Similar to overhead display **302**, overhead display **1002** is formed from a plurality of arcuate display segments **1008**, **1010**, **1012**, **1014**, **1016**, and **1018** each having an inner display panel and an outer display panel, as described herein. Further, although kiosks **1006**A-**1006**D are positioned, in this example, in a circular shape, it will be appreciated that kiosks **1006**A-**1006**D may be positioned in any suitable shape, including those described herein. Likewise, overhead display **1002** may be formed or assembled in any suitable shape as well (e.g., any polyhedral or ring shape).

FIG. **11** is a flowchart illustrating an example process **1100** for assembling an EGM lounge, such as any of EGM lounges **300**, **600**, **700**, **800**, or **900** and/or kiosk gaming lounge **1000**. Accordingly, in at least one embodiment, and as described above, bank of EGMs **304**, **604**, **704**, **804**, or **904** (and/or bank of kiosks **1004**) may be arranged or positioned in a desired shape (e.g., a ring-shape, an oval-shape, a triangle-shape, a rectangle-shape, or a square-shape) on a floor surface (step **1102**). For example, EGMs **104**A-**104**D of bank of EGMs **304** may be arranged at ninety degree intervals, such that a gaming display area **118** of first EGM **104**A faces a gaming display area **118** of second EGM **104**B disposed diametrically opposite second EGM **104**B. Similarly, a gaming display area **118** of third EGM **104**C may face a gaming display area **118** of fourth EGM **104**D disposed diametrically opposite third EGM **104**C. Although four EGMs **104**A-**104**D are described, it will be appreciated that any suitable number of EGMs **104**A-**104**X may be included in bank of EGMs **304**, **604**, **704**, **804**, or **904**. Likewise, any number of kiosks **1006**A-**1006**D may be included in bank of kiosks **1004**.

In addition, overhead display **302**, **602**, **702**, **802**, **902**, **1002** may be assembled, as described herein, from one or more display segments, such as, for example, arcuate display segments **306-316**. For example, each arcuate display segment **306-316** may be mechanically and/or electrically coupled to two other arcuate display segments **306-316** (one on each end) to form overhead display **302**, which after assembly, is also ring-shaped. Specifically, overhead display **302** may be assembled from arcuate display segments **306-316**, such that a diameter of overhead display **302** is substantially equal to a diameter of the ring-shape formed by bank of EGMs **304**. Likewise, display segments of the lounges **600**, **700**, **800**, **900**, **1000** may be similarly assembled to form an overhead display **602**, **702**, **802**, **902**, **1002** having a desired shape (e.g., an oval-shape, a triangle-shape, a rectangle-shape, a square-shape, etc.)

In one embodiment, each display segment (e.g., each arcuate display segment **306-316**) may be independently coupled to and raised on a respective support stanchion (e.g., support stanchions **334-344**) prior to coupling arcuate display segments **306-316** in a ring-shape (step **1104**). The same may likewise apply to raising display segments of lounges **600**, **700**, **800**, **900**, and **1000**. Once each arcuate display segment **306-316** is in a raised position, arcuate display segments **306-316** may be coupled, as described herein, to create overhead display **302**, which is ring-shaped in its final assembly (step **1106**). In another embodiment, overhead display **302** may be first assembled from arcuate display segments **306-316**, positioned on support stanchions **334-344** after assembly, and raised, such as by a plurality of linear actuators, into an overhead position above bank of EGMs **304**.

FIG. **12** is a flowchart illustrating an example process **1200** for displaying content on an overhead display (such as overhead display **302**, **602**, **702**, **802**, **902**, or **1002**) of a lounge (such as any of lounges **300**, **600**, **700**, **800**, **900**, or **1000**). Accordingly, in one example embodiment, a controller, such as a game controller **202** of an EGM **104**A-**104**D within bank of EGMs **304** and/or a display controller of any arcuate display segment **306-316**, controls overhead display **302** to display a first set of content on inner display **303** (step **1202**).

As described herein, any EGM **104**A-**104**D of bank of EGMs **304** may communicate with and control any arcuate display segment(s) **306-316**. In addition, any EGM **104**A-**104**D may control what is displayed on the entire overhead display **302**, such as by controlling each arcuate display segment **306-316** independently and/or by providing a control instruction to a display controller of one arcuate display segment **306-316**, which may communicate the control instruction to other arcuate display segments **306-316**. Likewise, in at least some embodiments, one or more display controllers of overhead display **302** may communicate with a server system **106-114** to receive and display content.

Thus, a first set of content may be displayed on each inner display panel forming inner display **303** of overhead display **302**. The first set of content may, in at least some embodiments, relate to a game being played on at least one EGM **104**A-**104**D of bank of EGMs **304**. For example, EGM **104**A may implement a first game, EGM **104**B may implement a second game, EGM **104**C may implement a third game, and EGM **104**D may implement a fourth game. In this case, the first set of content display on inner display may relate to any of the first, second, third, or fourth games. For example, the first set of content may indicate a game outcome (or outcomes, such as an award or jackpot) provided in any of the four games. As described elsewhere herein, the first set of content may also include a tournament leaderboard from a tournament game played on EGMs **104**A-**104**D.

Likewise, in at least some embodiments, each inner display panel of each arcuate display segment **306-316** may display a set of content related to a game implemented on any of EGMs **104**A-**104**D. For instance, an inner display panel of second arcuate display segment **308** may display content related to a game played on EGM **104**A, while an inner display panel of third arcuate display segment **310** may display content related to a game played on EGM **104**B. More generally, each inner display panel of each arcuate display segment **306-316** may display content related to a game played on an EGM **104**A-**104**D positioned under (or substantially under) the respective arcuate display segment **306-316**.

If the game is a tournament game, each inner display panel of each arcuate display segment **306-316** may display at least one relative position of a player on a tournament leaderboard. For example, each inner display panel of each arcuate display segment **306-316** may display a relative tournament position of a player (e.g., on a leaderboard) on an EGM **104**A-**104**D positioned under (or substantially under) the respective arcuate display segment **306-316**

In addition, content may be controlled, as described herein, in a manner that causes the content to appear to move between an EGM **104**A-**104**D and an inner display panel of an arcuate display segment **306-316**. For example, when an award (e.g., a jackpot) is provided in an EGM **104**A-**104**D, the content may also be controlled to move or "fly up" to one or more inner display panels of one or more arcuate display segments **306-316**. As a result, other players within EGM lounge **300** (who are facing away from the player achieving the award, as described above) may see an indication on inner display **303** that another player has achieved an award (thereby adding to player excitement).

Content may also appear to "fly down" (e.g., in the form of a lightning strike) from one or more inner display panels of one or more arcuate display segments **306-316** to one or more EGMs **104**A-**104**D. For example, in at least one embodiment, when a player achieves a certain type of game event (e.g., an award, such as a jackpot), content related to the game event may initially fly up from the player's EGM **104**A-**104**D to an inner display panel of an arcuate display segment **306-316**. Thereafter, the content may be displayed on one or more other inner display panels of one or more other arcuate display segments **306-316** (e.g., all inner display panels), whereupon content may fly or down (e.g., as a lightning strike) to the gaming display areas **118** of one or more other EGMs **104**A-**104**D. Content may also transition from an inner display panel of an arcuate display segment **306-316** to an outer display panel of the same arcuate display segment **306-316** and/or another arcuate display segment **306-316**.

Thus, content may move or flow between EGMs **104**A-**104**D and inner display panels of arcuate display segments **306-316** in a variety of patterns and using a variety of animations, where a lighting strike effect is only one of many possible such animated effects. Content may also be distributed, with inner display **303** of overhead sign **302** functioning as a content distributor, from one EGM **104**A-**104**D to one or more other EGMs **104**A-**104**D. For example, when one player wins an award, content related to the award may fly up to inner display **303** and back down, in the form of an award to one or more other players within EGM lounge **300**, to one or more other EGMs **104**A-**104**D.

In the example embodiment, a controller, such as a game controller **202** of an EGM **104**A-**104**D within bank of EGMs **304** and/or a display controller of any arcuate display segment **306-316**, also controls overhead display **302** to display a second set of content on outer display **305** (step **1104**). In some embodiments, the second set of content may be similar to, or the same as, the first set of content. For example, the second set of content may mirror the first set of content, such that the first set of content is display on an inner display panel of one or more arcuate display segments **306-316** as well as a corresponding outer display panel of the one or more arcuate display segments **306-316**. When content is mirrored in this fashion, casino patrons located outside EGM lounge **300** may be able to watch some of the game events that occur within EGM lounge **300**, thereby increasing excitement and attracting new players to EGM lounge **300**.

In some embodiments, the second set of content may also be different from the first set of content. For example, the second set of content may relate more generally to one or more game being played on EGMs **104**A-**104**D, as described herein. For example, where a tournament game is being played by EGMs **104**A-**104**D within EGM lounge **300**, content more generally related to the tournament game (such as a tournament game theme, a tournament leaderboard, an attract mode, and the like) may be displayed on outer display **305** of overhead display **302**. In one example embodiment, each outer display panel of each arcuate display segment **306-316** may display a relative tournament position of a player (e.g., on a leaderboard) on an EGM **104**A-**104**D positioned under (or substantially under) the respective arcuate display segment **306-316**. In other words, an outer display panel of an arcuate display segment **306-**

316 may display a relative tournament position of a player on an EGM 104A-104D positioned under, substantially under, or closest to the arcuate display segment 306-316. In another embodiment, outer display 305 may display an attract mode and/or another suitable animation or video graphic.

Thus, in various embodiments, outer display 305 may display a variety of content, some of which may the same as content displayed on inner display 303, and some of which may be different from content displayed on inner display 303. Moreover, in some embodiments, a display device may be included on an outward facing surface of EGMs 104A-104D (e.g., a surface facing outward from EGM lounge 300 and viewable by casino patrons outside EGM lounge 300). Where EGMs 104A-104D include outward facing display devices, content may also appear, as described above, to transfer, or "fly up to" and "fly down from," outer display 305 of overhead display 302. For example, content may appear to fly down from an outer display panel of an arcuate display segment 306-316 in the form of a lightning strike to an outward facing display device of an EGM 104A-104D. Although a lightning strike effect is described, it will be appreciated that a variety of animation effects may be implemented to illustrate the transfer of content from overhead display 302 to an EGM 104A-104D.

Thus, an overhead display configured to be mounted over a bank of electronic gaming machines is provided. The overhead display may be assembled from a plurality of arcuate display segments, where each arcuate display segment includes an inner display panel and an outer display panel spaced radially outward of the inner display panel and extending substantially coaxially with the inner display panel about a common center axis. Once assembled, the overhead display is ring-shaped and includes an inner display and an outer display formed from the plurality of arcuate display segments.

In operation, a variety of content may be provided to the inner and outer displays of the overhead display. For example, a first set of content may be provided to the inner display, and a second set of content (which may be different from or the same as the first set of content) may be provided to the outer display. In one example, content is transferred using an animation effect between one or more EGMs positioned under the overhead display and the inner and outer display panels of the overhead display to create a variety of content delivery and display effects.

While the invention has been described with respect to the figures, it will be appreciated that many modifications and changes may be made by those skilled in the art without departing from the spirit of the invention. Any variation and derivation from the above description and figures are included in the scope of the present invention as defined by the claims.

What is claimed is:

1. An overhead display configured to be mounted over one or more electronic gaming machines, the overhead display comprising:

a plurality of display segments, each display segment of the plurality of display segments configured to mate with at least one other display segment, the plurality of display segments forming a display assembly defining an assembly center, each display segment including:

an inner display panel facing inward toward the assembly center; and

an outer display panel, the outer display panel being spaced apart from and outward from the inner display panel and facing outward from the assembly center.

2. The overhead display of claim 1, wherein each display segment of the plurality of display segments comprises one of a linear display segment or an angled display segment, and wherein the each display segment is configured to mate with at least one other display segment to form overhead display in a polyhedral shape.

3. The overhead display of claim 1, wherein each display segment of the plurality of display segments comprises an arcuate display segment, and wherein the inner display panel of each arcuate display segment defines an inner arc having an inner radius from the assembly center, and wherein the outer display panel of each arcuate display segment defines an outer arc having an outer radius from the assembly center, the outer radius greater than the inner radius, the outer display panel being spaced apart in a radially outwardly direction from the inner display panel.

4. The overhead display of claim 3, wherein each arcuate display segment of the plurality of arcuate display segments is configured mechanically couple to two other arcuate display segments, whereby the plurality of arcuate display segments, when coupled, form the display assembly into a ring shape having an interior display surface concentric with an exterior display surface.

5. The overhead display of claim 1, further comprising a processor and a memory, the processor configured to execute instructions stored on the memory, which when executed, cause the processor to at least:

control the inner display panel to display a first set of content; and

control the outer display panel to display a second set of content that is different from the first set of content.

6. The overhead display of claim 1, wherein the overhead display further comprises a processor and a memory, the processor configured to execute instructions stored on the memory, which when executed, cause the processor to at least:

control the inner display panel to display a first set of content related a game outcome of a game available to be played on at least one electronic gaming machine of the one or more electronic gaming machines; and

control the outer display panel to display a second set of content related the game available to be played on the at least one electronic gaming machine, the second set of content different from the first set of content.

7. The overhead display of claim 6, wherein the game available to be played on the at least one electronic gaming machine of the one or more electronic gaming machines is a tournament game, and wherein the first set of content is related to a tournament game outcome, and wherein the second set of content is related to a leaderboard of the tournament game.

8. An electronic gaming machine lounge comprising:

a bank of electronic gaming machines; and

an overhead display configured to be mounted over the bank of electronic gaming machines, the overhead display including:

a plurality of arcuate display segments, each arcuate display segment of the plurality of arcuate display segments configured to mate with at least one other arcuate display segment, the plurality of arcuate display segments forming a display assembly defining an assembly center, each arcuate display segment including:

an inner display panel defining an inner arc having an inner radius from the assembly center and facing radially inward toward the assembly center; and

an outer display panel defining an outer arc having an outer radius from the assembly center, the outer radius greater than the inner radius, the outer display panel being spaced apart in a radially outwardly direction from the inner display panel and facing radially outward from the assembly center.

9. The electronic gaming machine lounge of claim **8**, wherein the inner display panel and the outer display panel extend substantially coaxially about a common center axis, and wherein each arcuate display segment includes a first end and a second end, the first end of each arcuate display segment including a first engagement surface, the second end of each arcuate display segment including a second engagement surface.

10. The electronic gaming machine lounge of claim **8**, wherein each arcuate display segment of the plurality of arcuate display segments is configured mechanically couple to two other arcuate display segments to mate with the two other arcuate display segments, whereby the plurality of arcuate display segments, when mated, form the display assembly into a ring shape having an interior display surface concentric with an exterior display surface.

11. The electronic gaming machine lounge of claim **10**, wherein the bank of electronic gaming machines are grouped together in a ring-shape underneath and substantially concentric with the display assembly.

12. The electronic gaming machine lounge of claim **8**, further comprising a plurality of support stanchions configured to mechanically couple to the overhead display, the plurality of support stanchions further configured to raise and support the overhead display over the bank of electronic gaming machines.

13. The electronic gaming machine lounge of claim **8**, wherein the overhead display further comprises a processor and a memory, the processor configured to execute instructions stored on the memory, which when executed, cause the processor to at least:

control the inner display panel to display a first set of content; and

control the outer display panel to display a second set of content that is different from the first set of content.

14. The electronic gaming machine lounge of claim **8**, wherein the overhead display further comprises a processor and a memory, the processor configured to execute instructions stored on the memory, which when executed, cause the processor to at least:

control the inner display panel to display a first set of content related a game outcome of a game available to be played on at least one electronic gaming machine of the bank of electronic gaming machines; and

control the outer display panel to display a second set of content related the game available to be played on the at least one electronic gaming machine, the second set of content different from the first set of content.

15. The electronic gaming machine lounge of claim **8**, wherein the bank of electronic gaming machines further comprises at least one electronic gaming machine having a processor and a memory, the processor configured to execute instructions stored on the memory, which when executed, cause the processor of the electronic gaming machine to at least:

control the inner display panel to display a first set of content related a game outcome of a game available to be played on the at least one electronic gaming machine of the bank of electronic gaming machines; and

control the outer display panel to display a second set of content related the game available to be played on the at least one electronic gaming machine, the second set of content different from the first set of content.

16. The electronic gaming machine lounge of claim **15**, wherein the game available to be played on the at least one electronic gaming machine of the bank of electronic gaming machines is a tournament game, and wherein the first set of content is related to a tournament game outcome, and wherein the second set of content is related to a leaderboard of the tournament game.

17. The electronic gaming machine lounge of claim **8**, wherein the bank of electronic gaming machines further comprises a plurality of electronic gaming machines, each electronic gaming machine of the plurality of electronic gaming machines configured to at least:

control the inner display panel to display a first set of content related a game outcome of a game available to be played on the electronic gaming machine; and

control the outer display panel to display a second set of content related the game available to be played on the electronic gaming machine, the second set of content different from the first set of content.

18. The electronic gaming machine lounge of claim **8**, wherein the bank of electronic gaming machines further comprises a first electronic gaming machine (EGM) that includes a processor, a memory, and a first EGM display device configured to present digital content specific to only the first EGM, wherein the processor is configured to execute instructions stored on the memory, which when executed, cause the processor of the electronic gaming machine to at least:

display a first graphical content on one of the first EGM display device and the overhead display; and

display a transition of the first graphical content moving from the one of the first EGM display device and the overhead display to the other of the first EGM display device and the overhead display.

19. A method for displaying content on a ring-shaped overhead display positioned over a bank of electronic gaming machines, the method comprising:

controlling an inner display of the overhead display to display a first set of content, the inner display facing inward toward a center of the overhead display; and

controlling an outer display of the overhead display to display a second set of content that is different from the first set of content, the outer display being concentric with and spaced radially outwardly from the inner display and facing outward away from the center of the overhead display.

20. The method of claim **19**, wherein the first set of content is related a game outcome of a game available to be played on at least one electronic gaming machine of the bank of electronic gaming machines, and wherein the second set of content is related the game available to be played on the at least one electronic gaming machine and different from the first set of content.

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